

581.9747
P97j2

PURSH'S
JOURNAL
1807

UNIVERSITY OF ILLINOIS LIBRARY
FEB 4 1924

UNIVERSITY OF ILLINOIS LIBRARY
JAN 28 1924

The person charging this material is responsible for its return to the library from which it was withdrawn on or before the **Latest Date** stamped below.

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.

UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN

APR 1 1977

MAR 8 1977

L161—O-1096

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

JOURNAL

OF A

Botanical Excursion

IN THE

Northeastern Parts of the States of
Pennsylvania and New York
During the Year 1807

By FREDERICK PURSH
PHILADELPHIA, PA.

BRINCKLOE & MAROT, Printers
1869

EDITED BY

Rev. Wm. M. Beauchamp, S.T.D., LL.D.

SYRACUSE, N. Y.

FOR THE

Onondaga Historical Association

1923

REPRINTED BY
THE DEHLER PRESS
SYRACUSE, N. Y.

UNIVERSITY OF ILLINOIS LIBRARY
JAN 28 1924

581.9747
P97j2

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

INTRODUCTION

The manuscript journal of the eminent botanist, Frederick Pursh, came into the possession of the American Philosophical Society, among some papers accompanying the herbarium of the late Dr. B. S. Barton.

An entry occurs on the first page of this manuscript, made probably by the executor of Dr. B., viz: "MS Journal of a Botanical Excursion in the Northeastern parts of Pennsylvania and in the State of New York, By an unknown person who appears to have been a German, & a friend of the late Dr. Benj. S. Barton. Found among the Books of Dr. Barton after his death in 1819."

Being the acting Librarian of the Society, this interesting little volume has recently fallen under my eye, [and] my attention was directed to the following remark which occurs under date of July 20th, by a gentleman who had previously, and casually read the manuscript:

"Mr. Geddes brought me to a deep valley, about one mile from his house, where we ascended a steep, very rocky hill; there large masses of rock seem to be piled up or tumbled over one and another in such a confused manner, that it has left large chasms between them, which sometimes appear like caves."

After enumerating a number of plants collected, he continues: "And what I thought most of, *Asplenium scolopendrium*. This Fern, which I don't find mentioned by any one to grow in America, I always had a notion to be found here, and indeed I was quite rejoiced to find my prejudice so well founded in truth."

And upon reading the observations of Mr. Paine, in the American Journal of Sciences and Arts, for September, 1866, on the discovery of the *Scolopendrium officinarum* by Mr. Pursh, and connecting and comparing the two paragraphs, the paternity of the MS. proved to be that of Mr. Pursh. But there are other confirmatory evidences of this fact. The Journalist relates that he had written to Dr. Barton—had received letters from him on several occasions, conveying the means for prosecuting his explorations, and

una

Lib. School-26 Sept-24

4 Feb 24 Dir g.

that he had consigned packages of plants to Dr. Barton from time to time. To settle the point, reference is made to the following paragraph, in the Preface to F. Pursh's "Flora Americæ septentrionis," p. viii:

"Within this period I had also formed a connection with Dr. Benjamin S. Barton, Professor of Botany in the University of Pennsylvania, &c., whose industrious researches in all the different branches of Natural History are so well known to the literary world. . . . I was enabled by the kind assistance of this gentleman to take a more extensive range for my botanical excursions."

"The following season, 1806), (1807 evidently—the labels on the original plants in the herbarium, also an entry in the MS. bear that date), I went in like manner over the Northern States, beginning with the mountains of Pennsylvania, and extending to those of New Hampshire."

Having obtained permission of the Society, this Journal is now published.

The terse, quaint, simple and peculiar language renders it the more interesting. It exhibits the character of the man in the light of an outspoken, kind-hearted person. To alter and anglicize its idiomatic phrases—to correct the many misspelt words, or change the structure of the sentences, would deprive it of half its interest. I therefore purpose giving it *verbatim et literatim*, and conceive the perusal cannot fail to please, amuse and instruct.

Mr. Pursh was born at Tobolski, in Siberia, and was educated at Dresden. He resided in this country from 1799 to 1811. During which time he made various botanical excursions. He went to England and published his Flora. He returned to America, and while engaged in collecting material for a Canadian Flora, died at Montreal, JUNE 11, 1820, aged 46 years. THOS P. JAMES.

(On the next page the Journal will begin and this will be followed separately, by my notes, and this by Onondaga Indian names of trees and plants, and this by P.'s names of Onondaga and Oswego plants, concluding with my brief notes on Mrs. L. L. Goodrich's "Plants of Onongaga County," published a few years before her lamented death. Several plants have been added to our local flora since its publication, and these will be added in my notes. W. M. B.)

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

PURSH'S JOURNAL

May 26.—Prepared myself for the journey, & but my things to the stage office, in which place I stayd over night.

27.—At 4 o'clock this morning we left Philadelphia, the stage being remarkable full of passengers & goods, which made it very disagreeable travelling; the road about 25. m. from the city got bad & hilly; we brok down the stage twice, but lukyly without any injury to us; arrived at 10 o'clock in the evening at Easton. Took up lodging at Abraham Horn's Sign of the Golden Swan. All this day I dit not observe anything in flower what I had not seen about Philada.

28.—The cramp ride in so full a stage, & the unaccustomed shaking of the body by the bad, rough roads made me feel more sore & stiff as I would have been if travelled on foot. I delivered my letter to Judge Wagener, who promised to give me all assistance in his power. Crossed the Lehigh and ascended a very steep rock opposite the town; vegetation here seemed to be somewhat later than at Philada. In flower, *Sisyrinchium mucronatum*. Mx.; *Azalea nudifl.*, *Cornus Florida*, *Cerastium vulgatum* & *glabrum* P., *Carex*, 2 or 3 species, *Arabis lyrata*, *Veronica arvensis* & *sedpyllifolia*, *Arenaria serpyllifolia*, *Senecio obovatus*, Muhl., *Viola palmata*, *pedata*, *cucullata*, *Erigeron pulchellum*, Mx.; *Krigia Virginica*, *Phlox subulata*, *Geranium maculatum*, *Oxalis corniculata*, *Potentilla repens*. This plant I never could satisfy myself about its species; it grows very common about Philada. on dry hills.

The hills about here are generally covered with Hemlock, Spruce and Cedars, mixed with Oak. Beginning to flower—*Hydrophyllus canadense*, *Arneraria setacea*, Muhl., *Scandix dulcis*. Out of flower—*Mitella diphylla*, *Arabis faleata*.

On a walk up the Lehigh I observed nothing remarkable—a few trees of the Nazareth *Quercus macrocarpa*, on a hill about two miles from town.

29.—Took an excursion up the Bushkill Creek. Observed

the former plants, together with *Aquilegia canadensis*. *Senecio obovatus* very frequently occurs here without ray, & seems to be at first appearance a very different plant. *Cratægus glandulosa*, *Oxalis violacea*, *Convallaria polygonatum* (?) & *racemosa*; *Hypoxis erecta*, a species of *Silene*, *Lithospermum arvense* in great plenty; a species of *Viola* with very long spur, not described, but if I am not mistaken I have seen this plant in the collection of Mr. Hamilton among the rarities of the mountains. In the same range of hills I observed another species, a much taller plant & the spur shorter and thicker, which I supposed to be the *V. debilis*, Mx. The banks of this Creek are covered with Hemlock, Oak, Hickory, & here and there, *Betula lanulosa*. I found a few bushes of *Dirca palustris*, which I did not expect here. The banks are covered with *Cacaliareniformis*—*Hypoxis trecta* in flower.

30.—Mr. Wagner was endeavoring to get me an opportunity of getting my trunk forwarded beyond the Water Gap; about noon we found a wagon going that way & I sent it off, intending to go to-morrow the same rout. After dinner I took an excursion on the Yersey side, but observed nothing new. I ascended two very steep rocks below Easton near the river, which convinced me so much the more in my Idea which I had made before, of the River Delaware having been of a much larger size in former ages than it is now. The bed of the river is plainly seen, & the fields on the east side are covered with rounted stones, similar to a river getting dry; those fields may extend about half a mile, & in some places a mile & a half, & are about 20. to 40. feet higher than the highest fresh now showing. The rocks I had ascended seem to have been Islands nearly in the middle of the old river, & have all the signs of their sides having been washed upwards of 50. feet high from the water, if not a great deal more. These rocks are covered with ferns of the common sorts, & shrubby trees common to this neighborhood. The view from those rocks is most charming—the neat town of Easton with its surrounding hills, the junction of the Lehigh with the Delaware, on the last of which an elegant new bridge has been erected on the same plan as the one over the Schuylkill at Philada., & the view of the distant mountains over all this is most charming.

31.—Early this morning I left Easton, the weather very

sultry & warm; by the time I came to Richmond, about 13. m. from Easton where I took dinner, I was overtaken by a thunder shower, which continued very severe for two or three hours, & afterward turned into a drizzling rain; being prevented so long from going on & having about 13 or 14. m. to travel to the place where I had sent my trunk to, I thought it best to stay over night & take my leisure in going through the gap, which I was very anxious to examine strictly. On my road to Richmond I observed nothing new. The *Podophyllum* was in full flower. The road goes all the way over barren and dry hills, producing the same plants in general as near Philada.

Jun. 1.—When I got up, I found it very cloudy, with drizzling rain; after breakfast it looked somewhat better. I took the road, but I had not went past 4. m. it began to rain again pretty hard; about two miles farther I came to a public house on the River, where I stood for some time to get dry & let the rain over, wishing very much to come to my trunk beyond the gap, I ventured out again, at the distance of about 2 miles the road began to get interesting, being on the foot of the mountain which forms the Water gap; But I was very much disappointed in my intention of spending a good part of the day here, the rain beginning again very hard, I had to make the best & the quickest of my road. I observed nothing new, a species of White Violet with thick cordated leaves I think I have seen before; on the rocks I found *Nephrodium lanosum* Mx. & *Spiræa trifoliata* for the first time in flower this season; a species of *Erigeron* is very plenty here, but suppose it nothing else than *E. purpurascens*. The scenery of this gap did not answer my expectations in grandeur; the mountain makes a very spacious opening for the river & the declivities of the rocks & hills on both sides are not deep, but very gradually descending, so much so that I thought I could ascend it in any place required. Since I had to be in a hurry, on account of the weather, I determined to return some day this week back to it, & have an attentive examination. I arrived after a short but disagreeable day's travelling at Mr. Houser's, where I found my trunk. This place is about 2 miles from the gap, & I have chosen it for a place of making my stand for excursions in this neighborhood, as long as I think it worth my while.

2.—This morning still rainy; about 10 o'clock it seemed to clear off; took an excursion on some of the hills & along the Smithfield creek; *Ranunculus philonotis*, *Anemone thalictroides*, &c. in flower; on the creek I seen the *Acer glaucum* with its seed shed; this maple seems to be a different species, though in general taken as a variety. *Justicia pedunculosa* in great plenty just sprouting up. The sandy banks covered with *Equisetum hyemale* & *arvense*, *Scrophularia nodosa*? (flowering).

After dinner I took an excursion up the Delaware on the road to the Manysinks. I begin to despair of getting anything interesting in this quarter, even the plants common to the banks of the Schuylkill, which are any ways interesting, I don't observe here; it is an arid slate & lime stone barren, though very finely timbered. However I expect to try to morrow the gap again, if the weather will permit it.

3.—This morning I set out for the Gap; I ascended the west side of the mountain in several places, to have the advantage of all kinds of situations, but my expectations of this place were still disappointed. A very rapid run, which makes beautiful little cascades, & nearly rises at the top of the mountain, was the place where I expected to see something new; but after all pains & trouble I found it to be the old story again. I made the following list of all the plants in their order, as I observed them. The *Geranium Robertianum* is the only plant I think not common; it grows in great plenty on wet rocks & makes a very handsome appearance. The banks of the river are covered with Hemlock, Black Birch, Beach, Chestnut, Hickory, Walnut, *Carpinus*, Oaks, &c., in great variety, & the sides of the hill with the same timber in proportion to their more or less fertile soil.

I found in full flower *Potentilla reptans*, *Rubus trivialis*, *Geranium maculatum*—*Fragaria virgin.* *Viola palmata*, *Erigeron bellifol.* *Cerastium vulgatum*, *Arabis lyrata*, *Sanicle marylandica* (b.) *Menispermum canadense*, (b) *Ranunculus abortivus*, *Houstonia cœrulea*, *Spergulastrum lanuginosum*? Mx., *Rubus odoratus* (b) *Aquilegia canad.*, *Henchera americ.*, (b.) *Oxalis stricta*, *Myosotis virgin*?—*Veronica agrestis*, *Oxalis violacea*, *corniculata*, *Hieracium venosum* (bf.) *Rumex acetosella*, *Cratægus coccinea*, *Leon-todon Taraxacum*, *Anemone thalictriodes*, *Aralia nudicaul*,

A. racemosa, *Smyrniun integerr.*, *Panax quinque folia* (b.), *Medeola Virgin.* three of the stamina, which are placed alternate with the inside petals, are longer than the three which are opposite them. The three side stigma is sessile. —*Poa trivialis*, *viridis*, *compressa*, *Elymus canadensis* without flower.

In seed—*Thalictrum dioicum*, *Sanguinaria*, *Saxifraga virginienensis*, *Betula lanulosa*, *Mispilus canadensis*, *Acer glaucum*, *Gnaphalium plantaginicum*, *Arabis faleata*, *Azalea nudif.*

Without flowers—*Rhus tryphinum*, *radicans*, *Verbascum Thapsus*, *Rubus* sp., *Actea racemosa*, *Clematis virginica*, *Ampelopsis quinquef.*, *Allium cernuum*, *Eupatorium perfoliatum*, *ageratoides*, *Rosa*, *Hypericum perforatum*, *Collinsonia*, *Impatiens*, *Marrubium vulgare*, *Sambucus*, *Mentha*, *Lysimachia quadrifolia*, *Pernanthes*, *Kalmia latifolia* (b.) *Rhododendron maxim.*, *Veronica virg.*, *Ptelea trifol*, *Spiræa salicifolia*, *Sonchus spec.*, called Lyonsheart, good for the snake bite, taken in milk.

The species of ferns I obesrved were *Nephrodium thelypteroides*, *achrostrichoides*, *marginale*, *lanosum*, *bulbiferum*, *punctilobulum*, *Filix femina*, *Adiantum pedatum*, *Polypodium vulgare*, *Asplenium trichomanoides*, *Trichomanes*, *Osmunda interrupta*, *cinnamomea*, *Pteris aquilina*, *atropurpurea*, *Onoclea sensibilis*, *Marchantia*, a species new to me.

I went three miles beyond the gap and, as I found it useless to clime up the mountain any longer, I thought to pay all attention to the situation of the gap & its turns in my return; accordingly, after taken some refreshment at Dills's ferry, I followed the main road through the gap; this ferry is three miles from the mountain. About here the River runs from N. N. W. (the direction of the River were taken with a simple small pocket compass, not noticing the variations). The banks high & the ground covered with loose stone, mixed with rounded off peples of all sizes. The Yersey shore seems to be lower & not much broken. One mile further on from the ferry a chain of high hills comes at some distance towards the shore, on both sides of the water. Two miles from the ferry the shore very steep, covered with *Rhododendron*, &c., great quantitys of loose stone, worn by the water. The chain of hills draws closer to the

water; about three miles from the ferry the gap begins; the kind of bottom land which lays between the water & the high hills, is of a sandy slaty nature, mixed with rounded pebles. A considerable large Island lays at the mouth of the gap; The River runs more from the north; The main ridge of mountains, through which it breaks is about a mile over, & the two faces of the mountain, in respect to their strata, quit corresponding. Those strata make about an angle of nearly 45° from N. W. to S. E. & consist of indurates lime stone granit. Within about 40 yards apparently from the top, the face of these rocks is rotten slate; which cuts off on both sides into a straight line; this slate cannot lay under granit, but must have been a vain, on which the water worked & made the present bed of the River.

[The diarist here gives a rough sketch.]

After passing this place the side of the mountain forms the banks of the river & an artificial road leads along the steep banks; the river soon after has its course more from the N. W. & keeps in this direction more or less for a mile & a half, where an island is by which it turns more from N. After passing 2 miles along this close mountain road, the valley opens into a kind of a bottom, terminates, & surrounded by hills & the river, which keeps now close to the main ridge, receives several large creeks, coming from all directions. In this bottom is the house of Mr. Howser, where I but up at; it is called 6. miles to Dills's ferry, from where I began my description.

Jun. 4.—This day I made some small excursions about the neighborhood of Mr. Howser's. Having been pretty much fatigued yesterday, & intending to go to Minisinks tomorrow, I dit not do much; but even the little I was about convinced me more & more that this were not a place for new discoveries. The Ideas which I have allways formed about the valleys beyond the blue ridge of having been large rivers or lakes, still come with more proofs to my mind; the water gap, which probably has been a large cascade in former ages, & the country behind it, have so much weight in this conjecture as any I know; a well which old Mr. Howser dug about 40. feet, the house standing on an elevated spot may be 80 or 100 feet above the river, was found to be entirely river sand, which still can be seen on the bank raised therewith.

Jun. 5.—This morning I set out on an excursion up the River. I had to call on a man who took my trunk from Easton here, who had told me, that in his neighborhood was a very rich valley; I went through it, to his house about 8. m. from Howser's, but observed nothing materially new; a species of *Ranunculus* with very long limber branches, which I suppose to be the *R. repens* & a *Viola* like the *debilis* of Michx; which grows near Mr. Johnes's mill in Blockley. At the house of Mr. Coolbaugh, the man above mentioned, I took dinner, & a man coming who wanted to go as far as the beginning of Minnisink that night, I availed myself of the opportunity of having company, to get there this night yet. We had about 19. or 20. m. to come to the place of his destination, it being one o'clock when we left the tavern, & yet we reached it before it was quit dark; when we came within 6. or 7. m. of it it began to rain very hard, but we kept travelling on. The Minisinks I first understood were on the Pennsylvania side; but there is no such thing; the country called so lays in Sussex county, New Yersey & extends from the New York line about 16. or 18. m. down the river, & about from 3 to 11 m back. This course I seen nothing new, the hills along the road are covered close with timber & *Cimicifuga serpentaria* (*Actæa racemosa*) *Aralia nudiflora* & here & there patches of *Podophyllum*, here called Mandarach, mixed with abundance of *Houstonia cœrulea* & other common plants of similar situation, are the only cover of the ground. We crossed the river at dark & took up lodging at Mr. Ennis's, who keeps a ferry & a house much frequented by the raftsmen. It looked very much for a heavy & settled rain.

Jun. 6.—Rain all day, my anxiety of seeing this place was disappointed for to day, but being pretty much fatigued, I expected that the disagreeable rest I had in a house I did not much like, would still be so more to my advantage; I slept most all day.

Jun. 7.—Sunday. Set out for an excursion up Delaware through the Minisinks. Following nearly the banks of the river, without road, I expected to see something interesting—but nothing occurred to me. In several places the *Salsola* grows in the sands, *Cistus canadensis* beginning to flower—I went up as far as the line of New York. Crossed the

River & went down it to a small village called Millford; here I stood over night.

N. B.—The soil through this part of Minisink is similar to the lower part of Yersey. The banks are covered with Silver or White maple, *Prunus virg.*, *Tilia americana*, *Platanus* & Chestnut Oaks, *Humulus lupulus*, *Celastrus*, *Uvularia perfoli* in flower.

Jun. 8.—Shortly before I left this to return to Ennis's, down the river, I learned that a Post office were kept in the tavern I had stopped: I wrote a few lines to Dr. Barton to inform him of my progresses in a few words: I set out from here, along the banks of the river on a very interesting road, going sometimes along a precipice of immense height down to the river. Millford lays on Saw Creek 1. m. below a small creek call'd White brook; 4 or 5 lower down the Connecheague. 6m. lower Reamannskill—from there to Dingmanns bushkill—along the river hills *Tragopogon virginicum*, a very hand some coloured plant, *Serophularia nodosa*; here I took an excursion up through the mountains, which are very high here: The berries of *Gaultheria* ripe, very good eating. On the highest knob, which was exceeding barren, I found *Lycopodium rupestre*. The *Pyrola umbellata*, called here Princess pine—*Cistus canadensis*. In descending the top I came to plenty of *Kalmia angustifolia*, & soon after to a springy piece of ground which led me to a stream of water, which finally forms a beautiful Cascade, which I admired the more as I was very dry & the water most excellent. A great abundance of the different sort of ferns & mosses common to wet shady places cover the rocks, & *Arum triphyllum* in full flower, with several other common plants. At Dingmanns I crossed the river, over to Ennis's, where I, after a long & fatiguing journey, arrived late in the evening. This day I killed a monstrous large snake, which I seen likewise in Virginia, called there Black Viper; here they call it blowing Atter; it is not common, but I was not able to examine it, partly for want of time & chiefly on account of the most horrid smell it emitted; they are said to be very poisonous, but on opening the mouth I could not observe the structure of that kind in her teeth.

Jun. 9.—After breakfast I took to the road on my return to the water gap; going the same road as I had come up the

River, the day exceeding warm & the fatigues of yesterday made me feel it so much the more. I took my course several times up the water courses to the mountains, but observed nothing interesting. I arrived in the afternoon at Hellers on the Bushkill. Here I stood over night; from this place I would have to turn off to the beach woods, so I inquired for the route, but could not get any satisfactory information. I had to return to Howsers on the Water gap, to sent off my trunk from there, so I expected to find information by some body there. All the country about here is nothing but heaps of mountains, interspersed by small streams of water, some of them so wild that there is no access to them; the vegetation generally the same as near Philadelphia.

Jun. 10.—About noon I arrived back at Howsers. Rested myself for the rest of the day, to make myself ready to set out for the beach woods to morrow. Packed up my trunk & made up my wallet to be ready to be absent from my trunk for some time; at least untill arived at Tyoga.

Jun. 11.—I had to wait for an opportunity to sent my trunk back to Easton, having no chance of sending it from this place to Tyoga; about noon a wagon arrived to go to Easton, with which I sent it oft; & immediately after set out for my journey. After ripe consideration, & being not able to get any good information about the route through the beach woods from above the river, I concluded to take the route to Wilkesbarre; being besides informed to meet with a great part of the route that way, similar to the beach woods, and to have to pass the very high mountain Pokono, which abounds in very large swamps, I thought it best to take that route. I travelled along side a ridge of hills & mountains, having a pleasant cultivated valley, bordered by the blue ridge to my left hand. I only travelled about 12m. to Shafer's tavern, where the road from Easton comes in.

The valley along the ridge, though only watered by little springs now, seems to have been a bed of a very fine large river, which probably emtied itself through the wind gap; all the stone found about here are roundet off, by the rolling in the bed of this large river; & even large rocks of several yards diameter, have the mark of having been worked upon by the water.

12.—I left Shafers' early in the morning, though, it being

very cloudy, I expected it might clear off, but having gone a little ways it began to rain & I was obliged to take shelter at another public house, only 3m. distance, call'd Huths. It formed itself into a rainy day alltogether, & having procured an old toren map of the tract of my journey at Minisink, which I found would all fall to pieces immediately, I betuck myself to making a copy of it, which occupied me nearly all day.

(Here Mr. James writes as follows: "This veritable copy of the map, with the route traced upon it by Mr. Pursh, has been presented to the American Philosophical Society, by Prof. A. Gray, to whom it was given by Prof. Tuckerman, of Amherst College. This gentleman, attending the sale of the Botanical Museum of the late Mr. Lambert, purchased two collections of American plants—one of which contained Pursh's duplicate specimens, and among them this map was found. A singular incident where things are brought together after a long period of separation: in this case a term of 60 years has elapsed.")

13.—Still rainy; but after breakfast it beginning to look likely for clearing oft, I went on towards Pokono mountain, only 5m. distance. Frequent showers interrupted me all the way. When I came to the foot of the mountain I observed the *Kalmia latifolia* beginning to flower. In a wet meadow *Senecio aureus*, *Stellaria graminea*? *decandria* 3 *gynia* *petalis bifidis*—Remains of *Trillium erythrocarpum*, *Diervilla*,—leafs of *Draccena borealis*, *Pyrola rotundifolia*—without flowers—*Anemone nemorosa*, *Orchis bifolia*? I found only one specimen, though I searched for more of this singular species of this tribe, but I expect to find a chance for more further on. The ascend of the Pokono lately has been turnpiked to the top, where they are still going on to meet the turnpike through the great swamp. I observed nothing particular, but coming to the barrens, in the top, I soon found *Cornus canadensis* fl.—*Rhodora canadensis* grows here in great plenty & might easily been taken for *Azalea* when out of flower; it nearly is done now flowering: *Trientalis* sp. I begin to doubt of its being the same as the European. This country being so high a spot, I thought it worthy of making some stay here, to have a full examination of it; accordingly I took lodging at a small hut, newly erected there for the accommodation of travellers. After

taking some refreshment I took a walk towards the pine swamp.

Those swamps, as far as they are accessible, are full of wet holes, filled with *Sphagnum* and other mosses, between which the *Cornus*, on high hillocks, shows its beautiful white flower: *Trientalis* in great plenty—here and there a plant of *Polygala grandiflora*, Walt. fl.—*Panax 3-foliata* fl. *Rubus Dalibarda*, *R. saxatilis*?—fl. the *Helonias erythrosperma* Mx. very frequent in more dry situations—just now drowing up its flowers,—they call it here Unicorn & say it poisons cows & other cattle. A species of *Trillium*, which I think has not been taken notice of by Michaux, & which I call *T. pictum*, on account of the beautiful red stripes which the petals are marked with on their base, grows all over these swamps. *Kalmia angustifolia* is natural to these grounds, either wet or dry. It is just beginning to flower. A species of *Viburnum*. In a small run *Chrysosplenium oppositifolium*,—*Thesium corymbulosum* fl. *Vaccinium disomorphum*, *resinosum*, *stamineum*, *pennsylvanicum*, in full flower. I observed a species of umbelliferous plant very common here, which seemed new to me. Leaves of *Ephilobium angustifolium* as I supposed.—Before evening I found in a very boggy wet place, among the shade of bushes, a species of *Convallaria* entirely new to me: It has a raceme of sparsed white flowers, & from 1 to 3 leaves on the stem; its roots go through the sphagnum & mud to such a depth, that with all my endeavors I could not get one wholly out of the ground.

Jun. 14.—In sight of this house there appeared a high mountain or knob, called Bimble hill, which I was anxious to ascend, it being only at a small distance from the place I stood at; the landlord & another man made up parthis with me, with their rifles, to go up to it & from it to the ponds, which are at a small distance from here; in ascending the mountain I observed nothing new, the sides & top are composed of a thin soil over loose stones & rocks; I found on moist places the *Cornus canadensis* up to the very top. *Diervilla* & the common mountain Gooseberry grow among the top rocks, though, the country being so very high, I did not observe the *Sorbus* or *Sambucus pubens* common to such places. On the N. W. side of this mountain several deep

holes, like wells, some of them above 30 feet deep, have been observed by the hunters; we were in pursuit of them, but could not find them; none of the company ever had been upon this mountain. The *Vaccinium stamineum* was here in flower in great abundance.

After having spent some time in examination of the top, we descended on the E. side to get to the ponds & Cranberry marshes. In coming near to the foot of the hill I observed strong plants of the umbelliferous kind above mentioned, which soon persuaded me to be nothing else but the *Aralia hispida*, though I don't know this plant, having never seen it, but the habitat shows this to be a species of *Aralia*; the people here call it Swamp Elder. Coming down near the ponds I observed several of the former mentioned plants, & for the first time in this neighborhood, the *Epigæa repens*. In crossing the main road I observed among the washed stones a kind of black lead ore, very heavy & but little apt to blacken the things rubbed with it; probably lead may be found in this part, if searched for diligently. *Dalibarda fragaroides*, out of flower, grows very frequently on mossy hillocks in company of *Mitchellarepens*—& very often *Helleborus trifolius*; when we came to the ponds & cranberry marshes all my attention was paid to the plants of the spagnum places. These marshes are covered with a thick coat of spagnum, floating in a manner on a more or less watery mud, which easily gives way & let you sink through one to four feet deep; below this a hard and sound bottom is found, which makes those places somewhat different from those, of a similar description, I have been used to see. At first I was somewhat timid, to go through, for fear of sinking deeper in, than I would be able to get out again, but finding so solid a base we went from one side to the other without any danger; the Cranberries of last year's growth were now in such a condition to make a very agreeable & pleasant repast; I never thought to eat so much of this fruit raw, as I did this day. On the edges towards the water, the *Orontium aquaticum* was in full bloom, which I suppose has been done flowering long ago in the neighborhood of Philada., amongst the Cranberry patches the *Sarracenia purpurea* was beginning to flower—farther off, & more near to the dry ground the *Andromeda pulverulenta*, & still more farther back from it the *Kalmia angustifolia* made very thick & low cov-

ers of the ground:—Here & there I observed some of the *Larix americana* called here Tamarack tree—& a great deal of that kind of Pines called here double spruce; for want of descriptions I can not recollect which it is.—Several species of *Carices* grew among the moss—& in the ponds itself the *Nymphaea lutea* began to show its flowers.—Those ponds unite their water & fall down Pokono to furnish one of the branches of Lehigh river. This mountain seems to be a good deal higher than the blue ridge & its vegetable productions show the relation of its climate with that of Canada. I dont know whether *Rhododora canadensis* has been found nearer to Philada. than this place but I almost doubt it has.

15. I intended to leave this, this morning, but it set in for rain which made me give up the Idea of leaving it this day: I wrote on the letter for Dr. Barton & finished it so as to have it ready, if any oportunity of sending it on, should offer. About noon it looked for clearing off; I took the road, but was soon overtaken by heavy showers which obliged me to take up lodging near Tobyhannah creek. Before I arrived there I fell in company of a gentleman on horseback going to Easton, to whose care I intrusted the letter, finished this morning, desiring him to be so kind as to but it in the post office there. Nothing remarkable seen all this day; as I descended down Pokono, gradually the plants, so interesting to me there, left me, one after the other, & only more common Pennsylvania plants made the cover of the ground.

16h.—The morning promising a fair day, I was anxious of seeing the great Wilkesbarre swamps; after entering it I soon found that I would have no more chance than just to walk the main road, which is generally made artificially with logs & ground on it; the *Tiarella cordifolia* grows here in great plenty; now in full bloom. I observed a white violet, similar to the one seen in the Water gap, but near to it & seemingly connected with the stolones of this, I observed leafs & roots of an other species with very large & thick leaves, quite different from the one mentioned. Here, for the first time, I seen the *Oxalis acetosella*, as I supposed Michaux calls it; this very handsome flowering species seems, to the best of my recollection of the same plant in Europe, to be quite another thing; the flowers of this species are fare larger, inside white, outside purplish, some quite

purple, both with dark purple stripes, which terminate near the base of the Lamina in a yellow eye. The flowers of the *O. acetosella* of Europe are clear white, without the stripes or the yellow eye, & far smaler as I recollect; the leaves may be the same shape, but as I suppose the specimens of Michaux were compared, in a dried state & likely bad ones, with the European sort, made the error. *Tomarix glauca* and *sempervirens* in full flower. The ground in any open place is covered with different species of Fern, *Osmundas* & *Nephrodiums* of the more common kind.

I did not observe any of the *Cornus canadensis* here, untill I had crossed the Lehigh, when I met with a few plants of it, & the *Convallaria bifolia* in full bloom. Here I likewise observed the *Azalea nudiflora* yet in full flower, which is done, almost everywhere else. The *Trientalis* is here in a larger & more european like shape, than I seen it at Pokono. —The chief timber of this swamp is, as far as I could see, Hemlock mixed with water beach (*Carpinus*) Aspen, &c. I think even if I would have taken the trouble to penetrate for some distance into it, I would not have found any thing more interesting, as I seen along the main road, with but very little deviation from it, now and then, when chance & opportunity required or allowed it. Late in the evening, after crossing several very high ridges, I arrived at Wilkesbarre & took up my quarters at Mr. Fell's.

Jun. 17th.—Wilkesbarre lays in a most charming situation, the rich and spacious bottom, which the mountains front here, on the Susquehanna is indeed picturesque. I have not seen a town in Pennsylvania so pleasantly situated as this is. Harrisburg, on the Susquehanna, is the nearest to it, but by no means equal in every respect; the newly opened turnpike to Easton, will bring the trade of the upper part of this river into the Delaware, as the land carriage of all kind of produce will be easier than the very difficult water carriage down the River.

Early this morning Mr. Fell, who had got an Idea of my pursuits, introduced me to Mr. Jacob Hart, an acquaintance of Dr. Barton, who expected to see a letter in my hands directed to him. Mr. Hart told me that he, at his journey to Philada. had heard of my coming to that place, & offered me, very kindly, all assistance in his power, to forward the

intend of my journey. I soon got into conversation with him about the petrefactions of shells, & he proposed a walk along the river, where he would show me plenty. Accordingly we took a walk about 10 o'clock. The impressions of the shells are plenty fully in a kind of loose Iron Ochre stone; it is the nature of slate, & opens almost any way you would wish; some of the shells are very well preserved, while others fall to pieces as soon as opened. I layd by some of the best specimens, as I intended to have an other walk along the shore, on purpose to collect some. On the rocks here I observed a species of *Galium foliis quaternis liniari lanceolatis, floribus albis*—which I, for the present, call *Gallium Mollugo*, though I think I am wrong in the name. I never seen this plant before, excepting in dried specimens in the collection of Dr. Barton. In going up the river we came to a bed of coal, which points out close to the edge of the water.

Mr. Hart observed that there was an open Coal pit at about 2m. from there, & if I choosed we would go to it; this was as welcome an offer to me as could be. We crossed Mill creek & turned off from the river. In this walk I found *Convolvulus spithamacus*—*Asclepias quadrifolia* & *Gratiola officinalis* in full flower. In crossing Mill creek & coming up the hill by the saw mill, I observed on the slaty gneis a good many signs of copper being in this neighborhood; the bloom of vertigriss showed itself in several specimens of stone & altogether the stone seemed to be of the same kind as that near Mr. Hughes' Iron Works at Antietam, in which place copper has been found. We at last arrived at the Coal mine, the sight of which I admired more than I could have expected. It lays in a draught or hollow, where one of the faces of the stratum of coal has been opened, by a little stream of water running with great swiftness alongside of it, & down a deep hollow by a kind of cascade. The face of this hill or stratum of coal is about 26 feet, from the surface of the ground to the level of the little run; the coal begins about 3 feet below the surface & its stratum goes below the level of the run; so that it may be judged to be a bed of coal more than 30 feet thick, & probably more strata below this, as it is even in this solid thickness very often interspersed with a layer of coal slate, or more properly premature coal. The blacksmiths of this place make use of it principally, &

like it for their work very much, & I expected if the mine was to be opened coal of a fare superior kind, than it is used now, might be found—not only in this place & along the river, as I stated before,—the vein of coal has been observed here, but in almost every place in this neighborhood. A very mighty bed of it seems to lay all through this bottom & along the ascend of the mountain, which, in a future perid, will make this place very rich & convenient for fuel. In examining this place a particulare impression on the slate, near the place where the water runs down a deep hollow, struck my eyes very much; it appeared but very slightly & seemed to be worn away a great part by time & water: these impressions were very much sunk in the slate & about 8 or 10 inches wide & from one to three feet long, marked throughout by very regular rows of deeper depressions in a diagonal direction. I observed 4 or 5 of these pieces of impressions, close to one another, laying in an irregular direction.

These impressions but me in mind of the large stone in your possession, with the net form'd impression which we supposed to be a species of Cactus; but these here are not exactly the same figure, but as regulare. I had a great wish to get a piece of this slate out, but as I had no tools I determined to come out again, provided with tools & plaster of paris, that, in case I should not succeed in getting a piece of stone, to make a kind of a cast of it. This day was exceeding warm; in the afternoon we arrived back to Wilkesbarre, having made a tolerable long excursion. I observed nothing new in vegetation, excepting the above mentioned plants in flower & some others most common everywhere.

18.—Having had a very restless night, & feeling very undisposed this morning, I kept in the house all day, resting myself. I apprehend a large drink of very cool butter milk, which I took yesterday when very warm, has done me a good deal of injury; colik made me to keep the bed in the afternoon, connected with a feverish heat.

19.—This morning I still feel very sick, & without any appetite for eating; I vomited frequently very heavy, & got so weak that I expected nothing else than to be laid up altogether. But still I thought that exercise, if I could stand it, might do me more good than to nurse myself. I got a

hammer & chissel & some plaister to go out to the coal mine, to see if I could get some of that impression. Mr. Fell, the landlord, dit go with me; he is a man of some learning & observation, his company was so much the more usefull to me. When we arrived there, I set to work, but was not able to get a piece of a square inch entire out, it being so very brickle that it flew in small fragments; I made a paste of the plaister, & cast a good large piece; main time that were a drying we looked about the place for more curiosities; after climing down the deep hollow, below the rock where the above impressions are on, we found the bed of the brook full of fragments of slate, coal and other stone; amongst these we soon observed numerous impressions of vegetables; some pieces of this slate consisting entirely out of a congregation of grass & reeds. I collected a number of the best pieces, among which were four different species of fern, very distinct: *Asplenium ebeneum*, *Polypodium vulgare*, *Pteris aquilina*, *Osmunda interrupta* & a sort of *Nephrodium*, with some pieces of reed or grass; there were large pieces with a kind of scitaminous plant, with very large leaves longitudinally & very finely nerved, but they were too large for us to carry this day. But the greatest pleasure I had, when by looking over these fragments of drowned vegetation, I found a piece with the same impression as the one in possession of Dr. Barton, & which was supposed to be a Cactus; by looking about I found more pieces, but all more or less defaced or worn. This impression, when seen with the Dr., I allmost doubted to be natural, but now, finding so many fragments of it among other vegetable impressions, makes it a proof to be a true impression of a vegetable; the above mention impressions on the horizontal rock above the hollow seem to belong to it, & have only been defaced by the water running over them, which has worn off the nett like figures, & only has left the holes between the meshes of the nett; the cast with plaister being not very dry, I left it standing to come out in the evening again, to get it. I carried a whole handkerchief full of impressions with me, & returned to the town, almost exhausted to faint away. I went to bed & in the cool of the evening I took another walk to the coal pit to see whether my cast of the impression got dry; but I found it was not, neither could I get a piece off; & as I had found, to my satis-

faction that it was not only a worn piece of the Cactus impression, as I for convenience call it now, I went back to town, not much disappointed. Mr. Hart, who keeps a store on the mouth of Lawahannock River, about 10m. from Wilkesbarre, at a place called Pittstown, intended to go there to morrow, & I promised to come out there likewise, if my health would allow it, as it would be so much on my towards the Beachwoods, which I was determined to visit.

In the neighborhood of the town I observed frequently *Iris*,—*Leonurus Cardiaca*—*Prinos verticillatus*? *Eupatorium perfoliatum*—*Andromeda paniculata*, *Spiræa salicifolia*, *Cephalanthus occidentalis*, *Veronica scutellata*, &c. I left the collection of Impressions to the care of Mr. Hart to sent them to Dr. Barton.

20.—Still very ill & weak, being not able to bear the least nourishment in my stomach; but I ventured to go to Pittstown on the Lawahannock. I travelled on slowly, & still I thought those 10m. a very good day's work in my weak situation; I found Mr. Hart there, & took lodging at Mr. Dulcers, the tavern where he keeps his store at. The road leading the greater part through cultivated lands, I observed nothing this day but the common weeds. The Susquehanna breaks, at this place, through a ridge of mountains called the Lakawannah mountain.

Sunday, Jun. 21.—I was very anxious of examining this seemingly interesting part of country; & being informed of a very handsome cascade called the falling spring, on the other side of the Lawahannock, I, in company of the landlord, set out for that place; this man was led to go with me, in hopes of finding out the place, where, by tradition of this place, a silver mine has been worked on the brook which forms this remarkable cascade. We went through very fertile fields & meadows; Strawberries were found ripe here; *Pentstemon pubescens*—*Erigeron bellidifolium*—&c. The shores of the Lawahannock were covered with *Viburnum*—*Cornus*—Silver Mapple—& a few Oaks mixed here & there with Ash.—The Elder is in these parts more plenty full than near to the Sea Shores. About a mile & a half on the other side of the Lawahannock, we came to the gap where the Susquehanna comes through,—& soon after to the cove in which this remarkable spring comes down; the side

of the mountain is here very steep & comes close to the bank of the river; in a small recess or cove, this small brook falls over a nearly perpendicular rock of from 80 to 100 feet high down; it forms one of the most picturesque & lovely cascades I ever beheld; the place is surrounded with shady trees & the rocks covered with ferns & moss of different kinds. The *Nephrodium bulbiferum* & *marginale* are the principal Ferns; *Stellaria graminea* grows among the moss, with *Mitella diphylla*, &c. I observed a *Orchis*, growing in the crevices of the rock, not in flower, but supposed to be *O. fimbriata*. *Acer Pensylvanica*, under the falls in flower. We climbed round the precipice to the top of the fall & followed this run up to the top of the mountain. This brook has so many smaller falls, that we hardly were able to come along, but we persisted in it, to the top of the mountain, where we found it having its origin in an altogether impenetrable & inaccessible swamp. I found here *Diervilla tournefortii* in flower & *Acer montanum* in seeds; from here we went over the mountain in another direction & home towards the tavern. This walk has been, in my present weak situation, very fatiguing to me. On our route home I found *Anemone pensylvanica* & *Geum canadense*. The river shore is covered with *Carpinus americana*, Water beach & White Mapple & Buttonwood.

22.—As I thought the neighborhood about the falling spring very interesting, I took an other excursion to it, to day. *Hydrocotyle americana*, not yet flowering, covers a great part of the wet rocks about it. I observed nothing new, & as I felt myself very ill, made the best of my way towards the tavern. Very much exhausted I arrived there, & indeed I apprehended the greatest danger from my situation of health. From the time I was taken with this sickness of stomach & colical complaint at Wilkesbarre, to this day I used the infusion of *Eupatorium perfoliatum*, which has done me good so often, very freely; but it would do no help this time, my stomach remaining in the same situation, not bearing the least of food or drink without vomiting. Notwithstanding all this I concluded, if possible, to leave this place to morrow, & go on towards the beach woods, which I was very anxious to see, without a day's time lost, for fear of losing a chance of seeing something interesting.

23.—Not finding myself sufficiently fit for setting out on the journey, I deferred it for to morrow, main time I took a walk to a very rich swamp, belonging to one Mr. Browne. I observed a species of *Ranunculus*, ceemingly new to me—*Veratrum viride* in full bloom—*Asclepias quadrifolia*—*Panicum lotifol.*, *Lobelia claytoniana*—*Viburnum* & *Cornus*—vide collection—*Calla palustris*, the white spatha of this plant has a beautiful appearance in the water. On my return I made preparations for getting on my journey to morrow. A small collection of dried plants I packed up, & left them to the care of Mr. Hart. I observed on the River-bank a plant without flowers, of a strong turpentine like smell; I took it to be *Chenopodium Botrys*. Mr. Hart furnished me with a letter to a gentleman in the Beach woods, Bloomfield Millbourne, who, he said, was a man of some information & very much acquainted in that country.

24.—Early this morning I paid my reckoning & went on my route up the Susquehanna. I had to keep the banks of the river for above 10. miles, to a creek called Butter milk Falls. Along the steep banks I observed *Viola lanceolata* on the shore—*Geum floribus albis* on the rocks; this species has large flowers & is new to me—*Campanula foliis lincariibus*—this may be the *rotundifolia*. I could not find the radical leaves alive; it is beautifull—*Thalictrum* (pfl.).—*Spiræa trifoliata* & *opulifolia*—*Polymnia canadensis* (afl.) *Lilium flore erecto patente, foliis verticillatis sparsisque*—*Pyrola rotundifolia* (afl.) *Pentstemon pubescens* in great plenty—*Hydrangea vulgaris* (afl.) *Hieracium venos.* Among all plants the *Rubus odoratus* made a most brilliant show; its beautifull crimson or rose colored flowers, among the very large showy leaves, ornament those steep hills in a most elegant manner. The *Ribes Cynosbati*, with prickly fruit, grows plentifully among the rocks, *Lobelia Claytoniana* very frequent, & the first specimen of *Orchis fimbriata* beginning to open its flowers; this is a very different plant from the tall sort I collected last year in the natural meadows on the Alleghany; I suppose this last one Muhlenburg has called *Orchis dentata*, or *incisa*, I cannot recollect which.

Buttermilk Falls is a small creek, coming out of a pond on the mountains; it runs over a bed of rocks & forms a num-

ber of falls; it is calculated by nature for mill seats; several of them have been erected on it, chiefly saw mills. From here the timber begins to be chiefly Hemlock, mixed now & then with Beach. I came as far as one Wm. Wall, where I lodged; this place is near the waters of Tunkhannock creek, where the Beachwood properly begins. The rocks & stones in this tract of country are generally a coarse grained limestone granit, mixed in several places with wacke & glimmer. In the creeks and small runs pebles of a basaltick blackish blue wacke, quit clear of any quartz or glimmer, are frequently found. Large lumps of budding stone, mixed of various colored pebles, laying in a bed of gray clay, mixed with coarse white sand are found plenty. Appearances of real lime stone is scarce.

25.—This morning I proceeded on my journey by paths narrow, undistinct, and though in a dry season, very muddy, on account of the springy nature of the soil in this part, calld the beach woods, & the impregnable shade of the trees. The beautiful *Oxalis acetosella* made its appearance again with her elegantly painted flowers. I have seen above 20. of the species of this genus from the Cape of Good Hope, but non with so handsomely marked a flower; I still think it must be a different plant from the *Oxalis acetosella* of Europe, as I never admired this common sort there for its colours, &, as far as my recollection goes, the flower is clear white & a great deal smaller than ours here. Michaux, I suspect, has made a mistake there. *Mitchella repens*, the first in flower. *Nephrodium femineum* & *thelypteroides* cover the ground in open woods. It is remarkable that all those places which are covered on the Oak lands with the *Osmunda cinnamomea* & *interrupta*, are here covered with the different species of the more common sorts of *Nephrodium*.

Among the rotten heaps of wood, drifted by water or fallen by wind, I found frequently the *Fumaria fungosa* (afl.)—*Caulophyllum thactioides* (pfl.)—*Potentilla hirta*? *Veronica scutellata*—*Dalibarda fragarioides*, *Iris* . . . *Viola circeifolia* V.—the same as I seen last year at Shenandoah & then called *V. populifolia*. This is a very elegant species, the inside of the flower is milk white, with purple stripes & yellow eyes at the bottom of the petals, the outside

of a fine, pale purple; can it be the true *Viola striata* of Aiton?—*Rhus vernix* grows very tall; I seen this 25. feet high, if not more. *Hydrophyllum virginicum*—*Cornus*, the *Carpinus americana* & the *Betula carpinifolia* is very frequently mixed among the beach & Hemlock. *Viburnum lantanoides*, called here Shin hoble, or Hobblebush, on account of its branches taking root and impeding the walk through the woods very much, forms large thickets in several places.

I crossed the Tunkhannock & proceeded on up Martin Creek; on the heath waters of this is the place called Hop bottom, where Mr. Millbourne lives, & where I intended to make some stay, to make excursions for further observations. All this country has been lately began to be settled, the roads are heavy, bad, & difficult to pass, & so much more to find, as the most of them are only blind paths. It got evening when I came to Hop bottom creek, & I give up the idea of reaching Mr. Millbourne's place, as it was three miles further on, but finding on enquire Mr. Millbourne to be at a house there himself, & just now ready to go to his place, I went there & delivered my letter from Mr. Hart; he offered me his horse to ride to his place, but I only accepted the offer of carrying my wallet on his horse, as I was exceedingly fatigued, & he, riding slowly on, I made the rest of the road to his house, through a very bad piece of road, full of roots & mire holes, in the dark. He appeared to be a very fine man, though of but little education, yet of a great deal of natural good sense. Mr. Hart had mentioned in his letter, to make me acquainted with the Leek & the Pigeon berry of this country, which he told me he would venture to show me, but thought that both of them were dyed down, as both are the earliest productions of the season. N. B. The *Tiarella cordifolia* is as common to this country as it is to the great swamps of Wilkesbarre. They call it here Rough leaf.

26.—This morning I took an excursion, accompanied by Mr. Millbourne, who wanted to show me the Leek & Pigeon pea, as he calls it. We could not find either of them, though he brought me to places where he said they were once found in great plenty. We tore up the ground in several places, & at last succeeded to find some of the roots of the leek. It

is a long bulb, of a very strong garlick smell, with a black skin outside; the leaves are broad & long, as he says, & appear the earliest of anything in this country; it grows in moist, shady places, along side the hills, near the bottom of the creeks. I cannot suppose it to be *Allium tricocca*, as that prefers a rocky situation.

By the way, in looking for these I observed *Streptopus lanuginosus* & *roseus*, (p. fl.) *Botrypus virginicus*, *Scandix dulcis*,—*Trillium erythrocarpum* (p. fl.) which flowers white & red here, & is called Bathroot, & thought to possess great power in diseases of the lungs & liver. *Acer montanum*, very common through these woods, called Elkwood.—*Orchis bifolia*? This very singular plant has, without doubt, the handsomest leaf of any of our natives; the two leaves lay opposite one another flat on the ground, are nearly circulare of a handsome lurid green, with darker longitudinal nerves, & sometimes 6. inches wide; the under side of those leaves seems to be set with very minute cristallizations, which, when magnified, are nearly of the structure of the Ice plant, which gives it a very striking appearance. The stock is generally from 12. to 15. inches high, angulated & naked. The spike of flowers is considerable long & loose; the bracte is lanceolate linear, acute, of the same texture as the leaf, only finer & as long as the germes. The germen is linear & lively green; the corolla is silvery white, with a green hue over it, & very open when in full bloom. The 3 outside petals or calyx leaves, are more greenish outside than the rest, the upper one is broad, ovate deltoide, or of a heart shap without sinus, & acuminate, the other two side petals are longer & oblique, seemingly only the half of the shape of the upper one; the three inside petals are narrower, the two upper ones oblonge & acute & oblique on their base; about the length of the lower outside one, the lower one or the labium longer than the rest, lineare oblonge & obtuse:—the spur is longer than the germen, & thicker towards the end; the anthers 2. laying in a groove on the upper end of the nectary or stigma, which seems to be only a continuation of the labium; they are of a clavate form, & at the time of fecundation burst out of their cases, & attach themselves to any part of the flower by way of a kind of clasper or foote on one end, which will get hold of any thing, in the eame manner as the claspers of *Bignonia radicans*

will do to a wall. This emigration of the anthers is very easily & distinctly seen in this species. Sometimes even the anthers will stick to the stem or the bracteis, or almost any part of the flower. It is almost certain that it is not possible any impregnation can find place, until they have burst out of their cases, as they are very closely confined there.

This plant is called here Allheal or Healall, & used by the people in fresh wounds, where it is found the most healing thing they would wish to have; they use the leaf & suppose one side will draw & the other heal, but I could not learn which sides they were. It is exactly the same talk as about the leaf of *Erythroriza* in Virginia. The root is fleshy & strong fibrous, with an ovate small & white bulb in the centre for the next year plant.

Mr. Milbourne told me that, two years ago, one of his neighbors, having himself cut very badly with an ax, applied to him to get him some of the Healall, but as those leaves had decayed at that season, he took a leaf seemingly allied to the true one in texture, & succeeded in curing the wound in a very short time; after that, he thought as much of that plant & more: as the leaves could be got at any season than of the true Healall (*Orchis bifolia*.) When he showed me this leaf, I found it was the same species of *Viola* I had taken notice in Wilkesbarre swamp, with large spreading cordate & very thick fleshy leaves, which growing then in company of a white flowering Violet, of another species altogether, I was mislead to take only for outgrown & old leaves of that same white *Viola*. But no other *Viola* leaves appearing in the neighbourhood of those plants shewn to me by Mr. Millbourne, I began to suspect my error. On examination I found young flower buds, & at the same time half formed seed vessels on some of these plants, which brought me to the determination of examining this doubtful plant more closely; & as it grew plenty and near hand, I deferred this examination for another day.

Ginseng was in berries—*Uvularia perfoliata* & *sessilifolia* (p. fl.) *Geum rivale*—*Sium canadense* (a. fl.) *Orchis spectabilis* (p. fl.) *Urtica* spec.—Black & Red Raspberries in flower. The Pigeon berries or Pigeon peas we could not find, until we returned to the house, where a place was where they commonly grow, in howing up some ground they

showed me the roots, by which I found them to be probably nothing else than the tuberculis of a species of *Glycine*, resembling marrofat peas very much: the pigeons scratch them up at certain times of the year, & feed upon them very greedily.

27.—The heath waters of Martin creek come out of several ponds laying in the highest parts of the beach woods. I was very desirous of seeing them. Mr. Millbourne, in expectation of getting some Venison, dit go along with me: as there is no road or path leading in particular to those ponds, I was very glad to get him as guide: though I would have been able to find them, it would have taken a night to stay on the road, which was now unnecessary, as he could find a more direct way to them without following the water, as I would have been obliged to do. We ascended gradually, crossing some of the branches now & then, on one of which was a very handsome cascade, on whose banks nearly the same plants grew, which I found about the falling springs at Lawahannock.

The *Oxalis acetosella* frequently occurs here, with quite purple flowers, which colour in some instances is quite deep. Mr. Millbourne made me attentive to a root which he calls Pepperroot. 'Tis a white, longe & articulated root, creeping on the surface of the ground, under the rotten leaves, & has but one leaf, which is three-lobed. I could not find any signs of flowering or any remains of a flower part, on it; but I suspected it to be a species of *Dentaria*. The root, especially the young shoots, have a very pleasant pungent taste; it grows very plenty here, in shady, moist places. When we come to the first pond we kept ourselves quiet, to watch for deer coming in sight: we seen but two, but both out of reach on the other side of the pond. I observed *Nymphaca lutea* & *odorata* in flower, the latter only beginning to expand:—*Pontederia cordata*, (a. fl.) which I dit not expect to find here. *Brasenia peltata* (a fl.)—this plant I always had an Idea to be a more Southern one, but it grows here to great perfection. *Schœnus cyperoides*? &c.

On the second pond I went on a Cranberry marsh, which produced nearly the same plants as those mentioned on the marsh on Pokono mountain. Mr. Millbourne told me that he had seen quit white *Cypripedium* on this marsh, &, by

his account, it seems to be a sort nearly related to the *C. acanle*. The borders of these lakes are very difficult to come at, excepting on those marshes, where you have to wade through the swamps & mire, sometimes to the middle. We went up to third pond, which is the highest; nothing new but a species of red currants with hispid fruit, quite new to me. It grows in wet, marshy ground. I found it afterwards in descending from three lakes or ponds, quite in a hollow, on one of the branches of creek, in marshy, muddy, rich land. The berries are very good to eat, at they say. *Nephrodium Filix mas*, as I suppose, grows here very tall & frequent. Besides this a variety of the more common ferns.

We returned to the middle pond in expectation of seeing deer, but finding none there, Mr. Millbourne, being provided with hook & line, made a dryal at fishing, as it were on the top of the mountain. He soon brought out some fine Sunfish & gold Pearch & a fish they call here Bull or Hornfish; it resembles a catfish very much, & grows sometimes to the length of 12 to 14. inches; the skin is black, he has 4. feelers above & 4. below the mouth, two of the upper ones are very long; the two brast finns are very hard & bony, from which it has been called Hornfish.

On our return from the ponds we came across a stoud bear, which we killed, but it getting late & beginning to rain, we were obliged to hang him there on a tree, & leave him there till the morning next. Before we reached home we got wet all through, & it got so dark that we had a good deal of trouble to come through the bushes without running our eyes out.

About the ponds *Lycopodium complanat.* & *Circæa alpina*, *Hydrocotyle americana*, *Drosera rotundifolia* were frequent. The latter had the most of her leaves containing a fly or muscoidoe, which they ketch in a similar manner as the *Dionæa* does. I don't think any place can be more infested with muscidoes & gnats, or as they call them here, Punks, as this country is. The people are obliged to make fires before their doors to keep them out of the houses, & them who milk cowes are obliged to kindle fire & make a smock to be able to stand milking, in the evening and morning.

28.—This day I was busy in drying & arranging the plants collected since I came here; Mr. Millbourne went to

the place where we killed the bear to fetch him home; he weighed 208. pound, with the skin, his meat tasted most excellent. In a small excursion I made I found plenty of the All-heal, & *Pyrola secunda* beginning to show his flowers. I collected a number of plants of the *Viola* with thick leaves, to have a close examination of it in the house, which made me sure that it is a new species, very easy to be overlooked by any botanist on account of its singular way of flowering; the fleshy root is full of tuberculls, between which the numerous fibres have their origin; between the foot stalks of the leaves, on the top of the roots, are several lanceolate stipulis, or scales involving the footstalk. From three to 6. leaves spread themselves out flat on the ground, their footstalks are long, semi-cylindrical & smoth. The leaves are ovate, cordate, repand, crenate, nervous, the sinus on their base small and narrow; the upper side hirsute or covered with scattered single short hair, the under side nearly smooth. They are of a strong fleshy texture, more so than any of the other species of this genus, to my knowledge; the flower stem or scape comes out between the leaves & creeps close to the surface of the ground, mostly under cover of the leaves, almost in the manner of stolones; it is cylindrical & sparsedly beset with lanceolata bracteais, of a membraneous texture & mostly of purplish brown colour; near the end of those seeming stolones, most commonly, they have a small leaf similar to the larger ones, in whose axilla a partial peduncul is formed, which, with its flower on the end, bends down to ground & almost covers the flower in the ground: from there the peduncul goes on in a similar manner, with opposite bracteais & one partial peduncul on each joint, so that it forms a kind of racem, with 3 or at most 4. flowers; in this manner of flowering it differs from all the rest. The flowers are small & very inconspicuous, they are allways nodding down & never open entirely; the calyx consists out of 5 unequal leaves in size but equal in length; they are acute & two or three of them have a projection behind, in the same manner as some of the plants of *Tetradynamia siliquosa* have; they are of a purplish green & very frequently spotted. The 5 petals are lineare & acute; the upper one is the longest, but only equal in length to the calyx, & likewise the broadest; generally white with red & purple stripes, & red or pink towards the point; the two lateral

ones shorter and narrower, white with but little red in them; the two lower ones very short, & very narrow & white. The 5 stamina have purple filaments & large yellow anthers, with a conical white projection or process on the top; they are entirely free, the germen is as long as the filament, 3-angulare & greenish. The style short, & with his hairy stigma only the length of the filament. The capsule is 3-angulare with rounded angles, smooth & considerably large for the size of the flower; it is green, spotted with purple, & sometimes entirely purple. The seeds round & white. I call this species, as I really think it to be a new one, from singular & hidden away of flowering, *Viola clandestina*, or if this would not be applicable, I should propose the name, though not used before, *V. stoloniflora*. It grows in rich stony & shady woods.

In the same places I observed another species similar to the former, yet materially different, which I called *V. assarifolia* in the collection. I regretted very much, not to have been earlier in the season in this very interesting country. A monographia of *Viola* would give a beautifull & interesting work, if it were possible to collect them all together, from all parts of the world, as they seem to be very generally dispersed. I think we could muster above twelve species towards it. This day kept on cloudy, with showers, & the evening got to be very cold for the season.

29.—I had intented to proceed on my journey to day, but it looked to much for settld rain. My intention was to go from here over the high lands which divide the north & southern waters of Susquehanna & then strike to the left down Meshopen creek, where some New England people settlements are, which would have brought me out below Tyoga point. But by advice of the people, who stated the badness & intricacy of the roads, beside the temper of those settlers at this time, being very yealous of their settlements, having lost them by a lawsuit, which has made them swear to kill ayn man who would undertake to convey the grounds, —this made me abandon the project, & I concluded to go to the Big bend & down the Susquehannah to Tyoga.—In an excursion to the woods I found *Nephrodium Dryopteroides*, Mx. as I suppose. I had never observed this Fern before. In the afternoon I went t a place where I understood the

Cypripedium spectabile, or *canadense* of Michx grew; I found but one bunch of it. This beautiful plant is the same I observed last year at Capon Springs.

30.—Still rainy, but looking again noon somewhat better, I took the road; this led up through winding valleys to the high lands, where I found considerable settlements; nothing new. The *Rarunculus acris* is here sometimes so plenty that it destroys the natural meadows. I seen whole meadows looking at a distance like a field of Rape in flower, with it. Here I first saw some *Cistus canadensis* in flower. I had put up about 10. m. from Big bend, on account of the frequent showers, at one Mr. Carr. I seen to day, a few plants of *Cornus canadensis*, out of flower.

July 1.—From here I soon reached the Susquehannah: the road leads close along the north side of the river. Oak & Pine are more prevalent here, & along with them the wet spots are more covered with *Osmundas*, whereas in the Beach woods, & similar places where Beach & Hemlock makes the chief timber, the several species of *Nephrodium* occupy the places of the *Osmunda*. *Pentstemon pubescens* & *Scrophularia nodosa* in great plenty along the banks. I made way to Chenango, a very handsome little village.

July 2.—From Chenango I would have had a strait road to the Salt lakes, but my appointed place was at Tyoga. I proceeded on down the River. *Populus tremuloides*, *Tilia americana*, *Cratægus Crus-galli*, *Cornus aspera*—& *fastigiata*,—*Thalictrum nigricans*—were the plants not observed before. The banks on both sides of the river alternately higher & lower, & the mountains, especially on the south side—which approach near the river—in some places considerable high. The timber on high places is chiefly Oak, mixed in the most places with pitch pine, more or less according to the soil. I staid this night at Owego, a small village, situated in a very beautifull place. Close to the water-edge of the river I found plants which in foliage appeared to be *Potentilla anserina*.

July 3.—From Owego I had but 17 m. to Tyoga Point.—*Hieracium venosum*, *Cistus canadensis*, *Cornus fastigiata*?—the *Asclepias quadrifolia*—this plant dit grow in the late cleared grounds, higher here than I seen it anywhere else. I found several specimen branching out in a number of um-

brellas, that it appeared to be quite a different plant. While I was walking along the river this morning, a black squirrel crossed the river, which I, anxious to know what it were, did kill. It seemed strange to me for a squirrel to take the water. *Oenothera fruticosa* & *parviflora* in flower. A little after noon I arrived at Tyoga, & but up at Mr. Tuttle's, where I had directed my trunk to be sent to; it had not arrived. On my calling on the post office I found a letter from Dr. B. S. B., with instructions to proceed on to Onondaga.

July 4.—I took an excursion from the house to the point, its meadows & banks of the river. Along the river I found similar petrifications in the loose, rolling stones similar to those at Wilkesbarre; some specimens I laid aside if I should find opportunity to send a collection from here; they were some beautiful large shells, remarkably well preserved. Several large stones were run over with a calcareous shell or cover, on which smaller pebbles had attached themselves, in a manner of rough cast.

Anemone dichotoma—*Galium Mollugo*?—*Smyrnum integerrimum*—*Euphorbia corollata*—*Thalictrum nigricans* which has a very heavy smell—*Lobelia Claytoniana* & *Hieracium lanatum* were in flower.—I seen a species of *Hypericum* along the river, which I supposed to be the *H. ascyroides*.—In the same places *Pulmonaria Virginica*—*Acer glaucum*—a species of dwarf Chestnut Oak & large bushes of *Crataegus coccinea*. Altogether I did not find this place, as far as I had seen, answering my expectations, & concluded not to delay any time in or about it, but to proceed on to more interesting scenes.

July 5.—This day I devoted to writing & drying plants:—small excursion,—nothing new.

6.—Left Tyoga, up Cayuta Creek—*Apocynum androsaemifolium* (b.) very plentiful in the cleared woods; in the Oak Woods I observed the Lily, often seen before, but I cannot recollect which species it is; it is *Lilium foliis sparsis verticillatis*; caule uniflora; floribus erectis; corollis campanulatis, semipatentibus, petalis unguiculatis.

The valley, formed by Cayuta Creek is in soil & vegetation similar to the beach woods—*Oxalis acetosella*, but not

plenty—*Dracæna borealis*—*Helleborus viridis*—*Orchis fimbriata* in full bloom—*Dalibarda violæoides* in fruit—The woods about with Sugar Maple. The valley is in some places very narrow & the creek very winding, which obliged me to wade it several times to keep the road.—I heartily expected to reach the house this night, which had been recommended to me to stay at, but I did not come to it before it got dark.—I observed in a small run a species of *Sium*, as I suppose, without flowers, whose leaves under the water were very fine divided, & the upper ones only pinnate; I call it *S. heterophyllum*. From a small tavern, which is kept here, it is about 22. miles to the head of Cayuga, which I intend to reach to morrow.—

7.—Having opportunity of going in company of a wagon, who would carry my things, I set out early this morning. The road leads through a very romantick valley, the mountains sometimes very high. After following the course of Cayuta cr: for 9. miles, we turned off to the right. The vegetation similar to what I mentioned yesterday, 8. miles this side of Cayuga city, or as it is called sometimes Ithaca, we crossed a place very beautifully situated, called Sapony Hollow: this place has been once cleared & probably settled by Indians, but it is now grown up with small white pine very handsomely mixed with *Populus tremuloides* & *Magnolia acuminata*. The last is very scarce about here & the trees here in this place & two or three others I seen, are of a creeply, small & old growth, nothing like to what they are in Virginia. At this place we refreshed ourselves and feed the horses. As far as this I had this days travel very agreeable, as on account of the roughness of the road & the deep mire holes in some places, the wagon could not go on as fast as I could walk, having plenty of time to look about myself: besides being unincumbered with any baggage. But the road getting now good & evening drawing nigh, I had to get into the wagon & we travelled tolerable fast.—About 3 or 4 miles from Sapony Hollow the timber changes into Oak & from there to Ithaca it is all Oak timber mixed with pine, with the rest of plants similar to Tyoga point. We arrived at Ithaca at night fall.

8.—Being now on the heath of Cayuga I remembered your information about *Erica cærulea* growing on the high lands

between Cayuga & Seneca lake; I was very anxious to seeing this plant in its native place, but having not received the particular directions for finding the place, as I had been promised of, besides that, being rather afraid of running myself out of money necessary to come to Onondaga, as my pocket was but low & the distance yet considerable, I had, to my own mortification, to give up all Ideas of a search for it. The morning was rather suspicious for rain as it had rained some all night. I was detained at Ithaca until 11 o'clock, when I set out for the lake, which is only 2 miles distance. My route was going on the east side of it. After having crossed Cayuga creek, with a great deal of difficulty to perform it, & coming on the rising grounds on the other side, I heard a very strong noise of falling water: I followed the sound & came to one of the most romantick & beautiful falls of this Creek I ever had seen; the access, even only to a sight of it, is very difficult; but I regretted very much, that I had not had the best information about these falls at the town, as I should have made it my business to visit them unincumbered with my baggage, though I might have spent the day by it. The ledge of rocks confined in a very narrow cove, & surrounded by high hills: (impossible to ascend with a load on my back on account of their steepness;) over which this considerable stream drows itself down, is a very interesting scene, & I doubt not if time & opportunity had allowed me to make an examination of it, I might have been paid for the trouble with something or other interesting or new in my line; but to go back to the town I thought to be too much; so I had to go on & be satisfied with having had only a peep at it.

I got in my road again, where I observed, along the banks of the creek, plenty of *Pentstemon pubescens*. About a mile further I came to the banks of the lake. The shore which I came to was clear & gravelly, with some weeds growing near it, as Thistles, Mulleins, &c. I followed the shore of it for several miles, being in my route. It is generally covered with oak, maple & hickory. *Buphthalmum helianthoides* is the first yellow syngenesia plant I seen this year, *Taraxacum* excepted. A small *Rosa*, similar to the one which I called last year *R. monticola*, is very plenty here, & spreads a most agreeable fragrancly through the air. A species of *Cratægus*—*Ludwigia nitida*—*Ceanothus amer-*

icanus—*Lilium canadense*—*Apocynum androsæmifolium* with a *Galium Mollugo*?—*Orchis fimbriata*—*Cornus* with white berries—*Erigeron corymbosum*! P.—*Typha angustifolia*—*Smyrniurn cordatum*—*Mimulus alatus*—*Galium hispidum*.—*Veronica scutellata* & some more common plants, I observed in the meadows leading to the lake. I travelled as far as the town of Milton, where I stood over night.

The road, as soon as I had left the banks of the lake, began to be quit uninteresting, as the fences on both sides & cultivated fields, with continued plantations & farms occasion the road only to be covered with common weeds, amongst which the *Verbascum thapsus*, *Anthemis cotual*, & *Polygonum hydropiper* have the upper hand.—In one of the woods on this road I collected specimens of *Nephrodium filixmas*?—

9.—I set out early this morning to make as much way as possible through this, for my purpose, to much settled country; *Carpinus americana* & *Ostrya*, which last I called *C. hispida*, on account of the cover of the young branches, with stiff hairs, are common in the woods; the timber very frequent, beech & *Betula lanulosa*, mixed now & then with Oak—*Morus rubra* frequent. On one of the farms I observed the mulberry cultivated in orchards, may be for the raising of silk worms & planted in regular close rows. *Cicuta maculata* I found on the road side in several places. Nothing new in flower. Lodged about 8 m. this side of Hardenberg's corner, or the outlet of Owasco lake.

10.—About 10. o clock I arrived at Hardenberg's corner or the outlet of Owasco; the day got exceeding hot, more so than I had experienced this season. I stayed to rest myself, feeling exceedingly fatigued; about 11 a stage from Canadagua came in, & as I found the road but very little interesting, being all a continued range of cultivated land, I concluded to take a seat in the stage, which would bring me to Onondaga this night yet, which I would not have been able to accomplish until tomorrow night, the distance being 22 or 23. miles. Here I observed the first plants of the *Myosotis lappula* for this season, growing along the road side in great plenty as a common weed. At Skeneatiles lake we took dinner. This is a most charming situation. At evening we arrived at Onondaga hollow, having had two hours

rain before we came there. Here I took up my lodging with John Adams. The post office being nearly opposite of this, I enquired for letters, but to my great disappointment found none.

11.—This day I rested & made some necessary arrangements about specimens which I had collected, either dry or in their green state. Enquired for the places of Capt. Webster & Squire Geddes.

July 12—Very anxious of seeing the Salt springs, which are only 5 m. from this place, to the north. I took a walk to them; but being Sunday & knowing that I would have further opportunity of collecting specimens, I did not provide myself with the tin box to collect any to day. The road goes chiefly through Oak woods, and crosses a considerable piece of swamp, through which the Onondaga creek runs, close to the road side. I observed plenty of *Zanthoxylum fraxinifol.* on its banks—several sorts of *Carex* & *Scirpus*—*Samolus Valerandi*,—*Asclepias tuberosa*—*Turritis falcata*, *Apocynum androsæmifol.*—&c.

When I came to the springs, the place is called Salt point. I found them to be situated in a low piece of a swamp, which is clear for a great part of all timber; The works for boiling being erected along the edge of this swamp, on a high bank & the water conveyed to them in pipes from a pump work, which is erected near one of the principall springs; some of the works are supplied by other smaller springs, the water being pumped by hand.

They boil the salt in potash kettles, holding from 60 to 100. gallons; 5 or 8. kettles form what they call a block, which has two fires to it; each kettle produces from a bushel to a bushel and a half of salt each boiling. The water is by far superior to any water I have tasted, where salt is manufactured. Near the springs themselves the *Salicornea herbacea* is the only plant which grows, but further oft in the mash, a variety of plants I am in expectation to find, but as I had only shoes on to day & intended to be back to my lodging, I deferred the examination of the mash to another day.

July 13.—My anxiety of seeing a letter from Dr. Barton was so great, that I thought it would be best to call on

Squire Geddes to-day, and see whether there was not one in his hands. He lives about 6 m. from the Hollow, north-west; I set out for it. Near Onondaga Court house plenty of *Cynoglossum officinale*, call'd here Tory weed, & *Myosotis lappula*, which is everywhere common along the streets. *Verbascum Thapsus* common on the waste grounds, & *V. Blattaria flore albo* is here and there to be seen about Onondaga. *Epilobium parviflorum* with red & white flowers, among the *Sonchus Canadensis*, which covers all clear spots in the woods; this *Sonchus* is the same as they call to the south Richweed, Milkweed & Buttonweed. *Cornus scabrosa*? & *fastigiata*? *Silphium laciniatum*—not yet in flower.—*Verbena urticifolia*—*V. hastata*—*Triosteum perfoliatum*—*Asclepias multumbellata* P. the same as I called so last year from the Peaked mountain—*A. umbellis pluribus nutantis laxifloribus, longe pedunculatis; calyx laciniis acutissimis; petalis reflexis calyce duplo longior, ovato oblongis, virescentes extus purpurascens: columna nectarifera basi purpurea, nectarea ovoidea alba, crassa, corniculis longis, convergentibus*—*Asclepias syriaca* is common about here. I likewise observed a plant which only seems to be common to limestone land & which I had observed last year throughout the great valley of Virginia frequent, but never had a chance then to see its flowers and seeds; it is the one which I have call'd in Dr. B. collection, but suppose wrongly, *Lithospermum latifol.* of Michaux: this plant is, as I then supposed, a *Cynoglossum*, & I call'd it in my journal last year, *C. parviflorum*, which name I shall use for it in the future—*Cynoglossum corollis pallide cærulea calyce subæquantes urecolatis fauces callis clausa; antheris intra tubum corollæ, nigricantes.* In fact I see no difference in the parts of fructification among this species, the *Cynoglossum officinale* & the plant which I take to be *Myosotis Lappula*. The seeds of these plants are very much alike in structure likewise, for which reason I think the *Myosotis Lappula* to be a *Cynoglossum* too.

Near Mr. Geddes I found the *Blitum virgatum* in fruit, & in his mill dam a monstrous thick covering of *Chara fragilis*, which emitted a most horrid smell, the dam being broke & dry, & the whole of this *Chara* turn'd to the sun, & changed its green colour, which it has, when under water, to a clear white; at my first coming to the creek, I thought

the bottom of the pond or dam was a kind of marle by its colour; but getting down to it, I found it to be the Chara which had covered the bottom all over.

Mr. Geddes was not at home & would not return untill next day: Mrs. Geddes, however told me, that if any letter of the kind I expected had been come to her husband's hands, she should have heart something about it, but she had not. I therefore returned towards the Hollow again. I observed plenty of *Chenopodium anthelminticum* along the road sides, which is very common about here; *Potentilla hirta* or *Norwegica*—*Geum floribus albis parvis* & the *Thalictrum dioicum* mas & femina in full flower.

14.—This day I visited Capt. Webster, he lived about 3. m. south of the Hollow. I found him to be a plain, friendly man; he was to busy, occupied in his work, else he would, as he said, take a walk with me through the woods; but if I would come & see him again, he would go with me to the Indian village, which I was anxious to see: I enquired about the Indian dog; but he told me that not one genuine one was to be found among those Indians any more, having degenerated by mixing with others to such a degree that hardly the traces could be seen in them. The *Hydrastis canadensis* grows in great abundance in the woods here; they call it Curcume; *Sanicula Marilandica*,—*Geum flore albo*—*Polymnia canadensis*—*Elymus canadensis*—*Potentilla Norwegica*—*Asclepias tuberosa*—*Galium circæzans*, &c., were in flower. The *Caulophyllum thalictroides* grows in abundance in these woods. It is called here Cohosh. Capt. Webster informed me that there was one sort of Cohosh growing here without berries, which I suppose to be the *Actea spicata*: I did not see any. The *Botrypus virginicus*, which is plenty here, is used by the Indians as a principal remedy in the venereal disease. On my return to the Hollow I observed *Cornus alternifolia*, which is calld Green Osier; the other species of *Cornus*, whose branches are always speckled, & which I suppose to be the sort with white berries, grows plenty in the woods hereabouts.

15.—As I had to get my boots mended I kept the house all day & wrote a letter to Dr. B, having as yet heart nothing from him. In the evening I took a walk to a store to get some paper. In going along Onondaga creek I observed a

species of *Potamogeton*, which I suppose either the *marinum* or *graminifol* I describe it *Potamogeton ramis dichotomis, foliis longis, crasis gramincis superioribus vaginantes, cum ligula longa membranacea spica pedunculata, antheræ 4. crassa, subsessiles. 2 loculares folialis calycis opposita, alba; stylis 4. stigmata pelatata atrorubra*. This species abounds hereabouts very much.

16.—This day I set out to have a thorough examination of the Salt marshes on Salt point. In going through the swamps between the Hollow & the Point I observed the *Mimulus alatus* in great plenty; *Ranunculus aquatilis* in flower, on the branches of the creek; at the point I went along a Causway made through the marsh & occasionally in the marsh itself, whenever I could get to it; but this season having been so much rain, makes it almost impossible to get in; last year, I was informed, one might have went every where through it, without much trouble, the season having been so very dry. *Cephalanthus occidentalis* & *Osmunda regalis*, fill up a great part of the swamp where any bushes grow. *Utricularia minor* I found but only one specimen in flower. *Potamogeton graminum*, *Lemna arrhiza* & *polyrrhiza*, *Triglochin maritimum*; calyx 3—phyllus; untheræ 3, calycis foliolis opposita & breviora, sessiles, squamis 3, basigerminis inserta coque adpressa, germen longum 3—gonum, stigma barbatum.—*Ipomœa rosea* foliis hastatis; *Vicia Cracca* & *Lathyrus*?—*Xanthium spinosum*? *Campanula crinoides*, *Veronica scutellata*, *Alisma Plantago*, *Sagittaria sagittifolia*? *Galium Mollugo* & *Galium foliis quaternis linearibus*.—*Hibiscus palustris*, putting forth his flowers. *Polygonum amphibium*—*Juncus* & *Scirpus lacustris*, *Galium 3 fidum*, a very small leaved species & truly 3 fid. & triandrous. *Ranunculus*, a very small creeping sort, in the salt marsh, with leaves lyke *Chrysopenium*. I calld it *stoloniferus*. It grows in thick tufts together, & covers the ground. *Asclepias syriaca* & *purpurascens*? *Scutellaria galericulata*?—*Lysimachia racemosa*,—*Glycine apios*, without flowers—*Apocynum cannabinum*—which is used by the Indians as a purifyer of the blood. *Sparganium ramosum*—*Arundo*—*Panicum*—*Scirpus*, &c. *Eupatorium perfoliatum* & *maculatum*.—A grass which I suppose to be a species of *Trachynotia* of Michaux. This is a grass I never seen before.

A species of *Sium* fills up a great part of the marsh; it appears the same as I observed at Cayuta creek & call'd *S. heterophyllum*.—*Sisymbrium amphibium* very frequent.—*Lysimachia racemosa*; this appears to be the same as the *bulbifera*. I did not find one single specimen with bulbs here, though I purposely searched for it; may be they are different after all?? A species of *Rose*, growing pretty tall, grows in the most wet places, among *Sparganium* and *Typha*, which appeared very strange to me; it is in great abundance through the swamps. A *Rumex*, which for want of a name I call *R. polygonoides*, is very plenty in the marsh. A plant unknown to me I found near the Salt works, in the marsh amongst *Iris* & *Scirpus*, with a long radial leaf like a beet, & the stem somewhat like *Lythrum verticillatum*; no flowers to be seen. Having myself sufficiently satisfied for this day, in this very disagreeable & stinking marsh, the day besides being very hot, I took some refreshments, & went towards my lodging at the Hollow again.

In my return through the swamps I observed *Pyrola rotundifolia*—*Epilobium angustifolium*, beginning to flower—*Aster conyzoides*—*Chara*—*Monarda coccinea* & beautiful plants of *Lilium superbum*.—In going to the Point this morning I observed a *Geranium* in foliage like the *G. carolinianum*, but with considerable large red flowers. I took but a small sprig of this intending to collect some on my return, but I could not find the plant again.

17.—This day I was busy of drying & butting by the plants collected yesterday. I received a letter from Dr. B. including 20. dollars, which I was very much in want of.

18.—Having promised this day to see Capt. Webster, I set out for his place. We took a walk to the Castle or Indian Village: this tribe is but very weak, they are very genteel & well behaved people, & industry begins to propagate among them: they have some very good fields of corn, which they keep in good order. My object was, for a great part, of learning the name of some herbs in their language: but Capt. Webster told me he knew the name of most trees himself & some of the more noted plants, which he could give me by & by. *Phryma leptostachia* grows very tall & large here:—*Polygonum aviculare*, the variety with upright stem & large leaves.—*Cicuta maculata* grows in great abundance

throughout Onondaga: the Indians use it to poison themselves, when they have an inclination in going out of this world: it is a most powerfull poison, as Capt. Webster tells me, who has seen the case on some Indians which had eaten the root, & was lost without being able to get anything as a remedy against it; it occasions Lockjaw & the patient is soon done. Elder bark or a Muskrat skin chopped fine, with the hair on is reckoned a remedy if soon applied to.

Buthalmium helianthoides in full bloom. *Hedysarum acuminatum* & a species of *Lespedeza* without flowers—*Cissæa alpina*?—*Triosteum majus*—*Nephrodium dentatum*—*Asplenium salicifolium* & *polypodioides* P—the former I could not find with fructifications. On my return I observed the same plant which puzzled me so much last year, and which I took then to be a species of *Batschia*. It happened, as then, that I came too late for seeing its flowers, but foliage & seeds indicate it to be very nearly related to it. After diligent search I found one small flower on the top of a small shoot remaining, which I carefully examined & found the following character: *Batschia parviflora* P—corollis pallide luteis, tubus calyce subæquante, limbus subclausus, callosus; staminibus inclusis. The *Cynoglossum parvëflorum* in plenty. This night Sqr. Geddes calld on my lodging, having returned from his journey & hearing, at the post office, a stranger having enquired for him. I promised to be at his place in a day or two.

July 19.—Rested myself & wrote, &c.

20.—To day I took the excursion to Sqr. Geddes, & intend to go from there across the country to the Salt point again. —The *Viola circæifolia* P., as mentioned in the beach woods, is yet in flower here. I observed all before mentioned plants on this route, & the remains of *Sanguinaria*. The *Carpinus Ostrya* is calld Ironwood here & sometimes Leverwood—the *Caprinus Americana* is, in common, Waterbeach. In a swamp near Mr. Geddes's the *Cupressus thyoides* in a Hemlock wood—*Pyrola rotundifolia* & *Orchis bifolia*.

Mr. Geddes brought me to a deep valley about 1 m. from his house, where we ascended a steep, very rocky hill; here large masses of rocks seem to be piled up, or tumbled over one & another in such a confused manner, that it has left large chasms between them, which sometimes appear like

caves: as it has a north aspect & overshadowed with trees, all the rocks are covered with moss and vegetables: & I suppose this must be a very interesting place for the botanist in the spring; the walking is very precarious, as, in some places, large holes are hid by weeds & bushes, & every step one is in danger of breaking a leg or falling into a gulph.

Here I found plenty of *Actea spicata*, chiefly with red berries, but some of the plants had beautiful white berries, looking like wax work. This is the Red & White Cohosh: the blue Cohosh likewise grows in plenty here: *Xylosteum tartaricum* is in abundance, *Ptelea trifoliata*, *Geranium Robertianum*, *Lonicera glauca*, with very narrow leaves, *Taxus baccata* or *procumbens*, called Ground Hemlock—*Polypodium Dryopteris*,—a species of *Clematis* seemingly new to me. *Satyrion repens*—*Circea alpina*—*Chrysoplegium alternifolium*—*Pyrola umbellata*—*Arum triphyllum*.

Asplenium rhizophyllum, & what I thought the most of, *Asplenium Scolopendrium*.—This fern, which I don't find mentioned by any one to grow in America I always had a notion to be here; & indeed I was quite enjoyed to find my prejudice so well founded in truth. It appears to be the same as the European, only smaller; is the European auriculated at the base, like this species? The Choak cherry is plenty on these rocks & another species of *Prunus*—A species of *Urtica* or *Boehmeria*, which I got from Virginia in similar places likewise. In going towards Mr. Geddes' house again I observed a *Ranunculus* which I call *R. geoides*. *Dirca palustris* grows here likewise. On the old rotten wood I observed a very singular *Clavaria*. I stood this night at Syr. Geddes.

July 21.—After breakfast I set out from here to Salt point.—On the road there I observed nothing but what I have mentioned before. Along road sides in general here, *Carduus lanceolatus*—*Verbena hastata*—*Cynoglossum officinale* & *parvifolium*. *Myosotis lappula*—*Verbascum Thapsus*—*Polygonum Persicaria*—*Anthemis Cotula*, &c. cover the ground.

At the Point I crossed the marsh to visit the banks of the lake—here I observed *Potentilla anserina*—*Stachys spec.*—*Sisyrinchium bermudiana*? *Cornus alba*—*Viburnum* called Cranberry tree—*Pantago major*—*Teucrium canadense*. I

think this is materially different from *T. virginicum*—*Solidago odora*—*Galium floribus ochro leucis*, *petalis acuminatis*—a very tall species of *Scirpus*—& several other plants mentioned before. In my return I found some more of the unknown plant, which looked like *Lythrum verticillatum*—it had flower buds in the axillis, which by dissection showed plainly to be *Lythrum*, & I suppose that very species I supposed.

On the shore of the Lake I visited, several salt works are erected, which are supplied from the main works with water, which is carried for that purpose about $1\frac{1}{2}$ mile. As it was late when I returned to the point I stood there over night.

July 22.—Returned to the Hollow, where I examined & dried those plants collected the last two days.

23) It being rainy I was confined to the house, writing,
24) drying plants, &c.

25.—Made an other excursion to Salt point. As I observed nothing new through the swamp & marsh, I went to a place calld Little Ireland or Liverpool—Here they have Salt Springs on the edge of the lake, most of them covered by the fresh water of the lake; there are about 150 kettles at work here. The shore of the lake & the bottom near the shore consists entirely of a white calcareous mud, which in some places is tolerably hard; this sediment is formed of disorganized shells & snails, & is the same process as, I suppose, by which in times of old our limestone beds are formed. I sometimes thought it would be more common to see petrification or impressions on the limestone as it really is, if it had been formed this way, by the sediment of decomposed shells & snails; but since I have seen nature going on here, in a manner demonstrative to the eye, all my doubts are over: this sediment, in some places, especially a little below the surface, is such a complete pap of lime or calcareous earth, that it wants nothing else than the drainage of the lake, to form a very solid bed of limestone, I think in a very little time. Observed nothing new in flower to day, except the *Cimicifuga seprentaria*, a species of *Helianthus* very common, & *Ceanothus americanus*.

July 26.—Spent the Sunday in the house, having only this morning returned from Salt point, very much fatigued.

27.—Was busy among the specimens. I expected to day a letter from Dr. B., but was disappointed.

28.—Having contemplated to go & visit Oswego & the Lake Ontario, as I did not find it well to spend so much time, without having something more interesting than to see the same thing & same places, over & over again; but I was disappointed by rain; consequently kept close house.

29.—It looking likely to get fair again I set out for Oswego; when I came to the Salt Point I concluded to go down with one of the boats which steady go from here in the Salt trade; but waiting & waiting for one to go, I was obliged to stay over night on the point.

30.—No boat being ready to go this morning, I took my way on foot as far as Liverpool, 3. miles; the road was good & I was acquainted with it; here I took breakfast; & from here a path begins, cut through the woods, leading down the river to Oswego. I observed *Gerardia flava* & *Helianthus squarrosus* in flower. After getting rightly into the path, I found the woods, in respect of timber & vegetation, as well as in respect of bad, miry road, similar to the Beach Woods. The land is springy and very rich; the path sometimes comes close to the Seneca river & sometimes is pretty distant from it; the travelling exceeding fatiguing, having to go for several rods round mire holes, to find a place to cross, & then to look, with all precaution, to get in the right path again: it is very seldom travelled, & in some places so blind, as if never a man had went that road. *Dalibarda violoides* I found yet in flower; the flowers are exceeding handsome & neat. I observed a *Juggermannia* not noticed before. Specimens preserved. Nothing new.

After a tedious journey I came to three Rivers point. This is a beautiful place—but only one house, who keeps tavern near it—here I took dinner. Seneca river from the S. W. & Onondaga River, or the outlet of Oneida Lake from S. E., come here together nearly at right angles & form the Oswego River to the North. Finding company at the tavern, in a man who was going as far as Oswego falls, with a couple cattle, having lately removed to live there, I undertook

to take it through with him, though the distance of 12. miles, in such bad road, at so late an hour, was rather more as I should have undertaken without it. After crossing Oneida River, or as they call it, Onondaga river, which I think very wrongly, I found plants of *Anona triloba*, the first I seen this season. *Cratægus Crus-galli* is very frequent here, & varies in the shape of its leaves most wonderfully, according to the more rich & poor, or wet & dry soil it grows in. I had to drudge on as well as I could, since I once had undertaken to go along. The man who drove the cattle was on horseback, but walked the chifest part of the way, as it was almost as tedious to write, as it was to walk. We liked to be overtaken by night, but were lucky enough just to clear our distance. When we came to the falls, which are very small, I had to go a mile farther to come to a tavern below the falls. The man who had moved there was in a situation not able to accommodate me. But though it was dark I had the comfort of a good road, as all the salt is here carried from the head of the falls, to this landing by carts. At the landing I took up lodging for to night, being in a manner almost worn down by fatigue. I collected, to day, the round leaved variety of *Veronica serpyllifolia*.

July 31.—This morning, after breakfast, I went down the river on board a boat. This River, though deep & large, having all the body of water in it, which is discharged by all the small lakes, is very much impeded by rifts or ledges of rock, which go across it, sometimes for a considerable distance. The bottom is, in deep & shallow water, covered with aquatic plants; some of them, chiefly *Potamogetons*, grow to an exceeding length in deep water.—Eels & Water snakes, both of a most enormous size, are the chief inhabitants of it. I thought to have observed some leaves of *Valisneria* floating on the water. The banks of the river are very romantick; in showing the woods & River in its primitive state, exactly as much so as when it was not known to white people. Here is no house or any sign of cultivation to be seen until you come near Oswego.

At Oswego Rift I quitted the boat, being only a mile to that place then by land. When I came ashore I observed a species of *Hydrocotyle*, with peltated leaves, without flowers, growing along the edge of the water. My walk dit go

along the shore which was covered with Chestnut, Oak, Hemlock—*Populus candicans*, *heterophylla* & *tremuloides*—*Scrophularia nodosa* in flower—*Hypericum perforatum* even has found his way to this retired place, in company with some more obnoxious foreign weeds. Soon after my arrival & having refreshed myself at Oswego, & went to see the lake, which indeed has a noble & grand appearance, & without knowing it previous to be only a lake, one would take it for the shore of the main ocean. The shore here is rocky & pretty high. As I wished to get something to eat & nothing had been ready before I went, I could only make a small excursion. I soon found *Hippophæ canadensis*, which is a very singular shrub. The different above mentioned Poplars, mixed with other wood, make the timber. Cornus several sorts, among which is the Osier rouge or Red Osier—one which has white berries, several sorts of *Salix*—*Rubus odoratus* in flower & fruit.—*Hamamelis virginica*, &c., form the shrubbery—a species of *Gnaphalium*, unknown to me & very handsome, is in plenty. *Vaccinium frondosum* & *Pensylvanicum*—*Hypericum* *Kalmia*—*Solidago spec.*—*Equisetum sylvaticum*, &c.

I had to wait till nearly sunset, before I could get anything to eat & then it was nothing but eel, which I never could eat. I had to do as well as I could, among people whose life was very rough, & who think about nothing but making some money, but the little trade they have here, which is chiefly salt. It is a place I dislike the most of any I have ever been at, in the United States. I was not able to get one civil man by whom I could get some information.

Augt. 1.—Yesterday & to day I made enquiries about a sandy beach, but all information I could get was, that it was above 30. miles distance. Though I was anxious of seeing such a place here, I had to give up the idea, as I had injured one of my feet very much on the day before yesterday. The big toe had inflamed itself to an alarming & painfull degree, the chief part of her skin having been rubbed off in travelling. I took another walk toward the lake, but observed nothing more than mentioned before. In the town the *Hyoscyamus niger* grows as a common weed in the streets. There are several specimens of very curious granit on the Lake shore in large blocks; they are red, mixed with black,

greenish black & white. They would look betutifull if worked into some monument. A small peple of similare construction I kept as a specimen. It does not appear to be any limestone in the banks of this lake, but I only seen a very small part of it, so I cannot exactly tell. My foot getting exceeding sore I concluted to return, as the place altogether was disagreeable to me. I could not stay to get it well here & so I sooner might return than stay, as I could do nothing here, I got on board a boat & proceeded up the river.

At Oswego rift the *Justicia pedunculosa* was in flower—*pedunculis longitudine foliorum, floribus capitatis, calyx 5—phyllus, subæqualis; foliolis lanceolatis tuba corollæ longio; corolla bilabiata, lab; superius planum, apice reflexum purpurascens, bifidum 1. emarginatum; lobis lateralibus erecto palentes, oblongo rotundato obtusæ. Lab. inferius ovato oblongum, obtusum lateribus reflexum, eleganter rubro-purpurascens punctatum; antheræ geminæ.*

I fished up several specimens of *Valisneria*, which grows in abundance in this river. *Plantago major* grows in the banks & sometimes in the water itself, with leaves so large as the *Pothos fœtida*. I, at first, could hardly believe it to be *Plantago*. *Pontederia cordata* is very frequent. *Potamogeton natans*, *gramincum* & *crispum* cover the bottom of the water in large beds. The navigation up this river is very tedious on account of the rappids or rifts: we arrived in the evening at Oswego falls, where I stood over night.

Augt. 2.—No boats going up to day, it being Sunday, I stood at the falls, as I was not able to undertake it on foot, on account of my sore toe. To spent the time to some purpose I got into a small boat & went in pursuit of aquatic plants. In a cove the river forms here, I found a field of *Nymphæa odora*, beautifully in bloom. It is astonishing in how deep water some of these grow. I pulled up flower stems 11 feet long, which did not seem to be entire nighter. *Potamogeton pectinatum* has done flowering. I observed this plant likewise last year in Virginia. A species of *Equisetum*, growing in four feet water, seemed to me strange; maybe it is a stem of the *Hippuris*? *Sagittaria lancifolia*—this plant was quite new to me, having never seen it before. A singular aquatic plant, with serrated leaves, I never could

quite make out what this is. I seen it frequently in New River last year. On some of the stones I found a curious plant attached to the rocks under water: it is articulated & consists of green joints, like blatters: may be it is a zoophyte! *Ranunculus aquatilis*, &c. On a gravelly island I found the *Lobelia cardinalis* in flower. About the shore I observed a *Silene* without flowers; specimens preserved.

Augt. 3.—This morning I got on board a boat again; observed nothing new excepting a long leaved grass which was floating on the water; the boatmen calld it Wild rice & said I would see plenty of it farther up, which was the case. It covers here the shore, & is, when in flower, quit upright. I suppose it to be the *Zizania fluitans*—at any rate it is a *Zizania*. Water snakes are very plenty in this river, & lay sometimes on the logs in swarms. It is very disgusting to see them & eat eel afterward. It soon began to rain, & I was exposed to it all this day, till we came to Three River Point, where we stopped & took dinner. It keeping on raining we stood here over night.

4.—We left Three Rivers this morning. I seen several ducks which are apt of alighting on trees; for this they are calld wood ducks. As we had good wind I had not much opportunity of observing any water plants: all I seen, however, were the same observed yesterday. When we came to the outlet of Onondaga lake, the Creek was coverd at its bottom with *Chara*, which the boatmen call Feather beds. The lake has exceeding clear water & a white bottom, which, I suppose, consist of shells, as above mentioned. We arrived at the Salt point about noon. Having taken something to refresh myself here, I proceeded on to the Hollow, being very anxious of getting a letter which would allow me to proceed on my journey, as I thought this place & neighborhood sufficiently explored. I found a letter from Dr. B. containing 10 Doll. but not leave to go on, or any direction whatever. I likewise got letters from Mr. Hart at Wilkesbarre, & Mr. Wagner at Easton, concerning my trunk, which I intend to order to be sent back to Philadelphia, as it is only a vexation of letting it follow on.

5.—Having plenty of plants to take care of.

6. I devoted the first part to it. Wrote letters, &c.

7. These 4 days were constantly raining;

8. I was not able to do any thing out of doors.

9.—Having no other persuit and the weather getting fair again, I went to Salt Point. I observed, besides the plants mentioned before, a species of *Andropogon*, very tall—*Monarda clinopodia*, as I suppose; the stem is solid & looks different from *M. allophylla*—*Hydrophyllum canadense*, Stag Cabbage—*Blitum*—*Silene pensylvanica*—*Chenopodium anthelminticum*—*Aster conyzoides*—*Hieracium spec.*—*Hedysarum nudicaule*—*acuminat.* & very tall large flowering sort, which makes a very fine show.—*Urtica procera* P. which I seen with Mr. Hamilton, who calls it *U. gracilis*. This evening set in raining again, which obliged me to stay at the Point.

10.—Rain all day; was confined to the house in consequence.

11.—Returned to the Hollow. Being sick & tired of this place, I expected to find letters for me, which would put me in a way to leave it, but was disappointed.

12.—Having been informed about the town of Pompey, having the highest land in this neighborhood, I concluded to visit it, as I had nothing else to do; accordingly I set out & arrived there about noon. The rise which the road makes, after leaving the main turnpike, is indeed astonishing. Before reaching the highest part of it I had a view of Onondaga & Oneida lake. The whole of the hill is under cultivation, consequently not very well answering my persuits. When I arrived at the town every thing was in a bustle about the militia parade, for to draft the number required towards the N. Y. state militia, as required by proclamation. I spent the afternoon in looking at their proceedings; nothing new this day. A *Sonchus*, common almost every where, grew here to the astonishing hight of 10. feet & more. The ground, generally, is exceeding rich & the timber, to the highest top of the hill, is beach & maple. Very handsome formed trees of *Cratægus Crus-galli*, I observed very frequent.—*Urtica procera*—*Helianthus squarrosus*—*Rudbeckia laciniata*, *Circæa alpina*, &c.

Augt. 13.—Having been informed about a very high fall of water at Pratts Mills, I went to see it: it is about 3 m. from the place I stood at over night. I crossed several high

lands, interrupted by valleys, & came to the little stream which forms these falls. When I came to it I could not perceive where it could have so powerfull a fall, as it was told me, as the ground seemed to go very gently downwards, as far as the eye could reach, & bordered at the East & West, or rather hemd in by a ridge, over which it could not run, & through which there was no opening. But when I came to the mill I was very agreeably surprised, by seeing the water fall down a precipice nearly perpendiculare, to the depth of above 300 feet, in a deep gloomy hollow all at once. I was anxious of getting down to the bottom, which I with some difficulty dit, & indeed a more romantick scene I never beheld; the vegetation is chiefly Hemlock & Maple. I observed here a beautifull species of Hypnum, which covered the ground: *Pyrola secunda* & *umbellata* in great plenty; *Lycopodium serratum* & *complanatum* likewise. Nothing new in vegetation. I expected to find some impressions here, as the bed of the brook looked somewhat like slate observed at Wilkesbarre, but I turned up several stones & found none. The rocks consists of a grey slate, which sometimes gives very good wet stones.

This hollow follows the run, with very steep banks as far as I dit trace it. From here, after having my curiosity satisfied, I proceeded down the hill again & arrived at night at Onondaga. In my way there I observed *Onosmodium*—*Amaranthus albus*, &c.

14.—} These three days being very interrupted with rain,
 15.—} I dit but little go out; & when I dit, seen nothing
 16.—} worth noticing. My anxiety of getting away from
 here is beyond all description.

17.—This day all the place was alive with the muster of militia for a drafting of them. I was not well all day.

18.—Having nothing else to do, & being almost out of patience of staying any longer at this place, I took a walk to Salt point; went through the marshes & along the banks of the lake, without any thing materially worth notice. I had not before observed the *Gymnocladus canadensis* grows on the banks of this lake, but I dit not see one large tree of all, being very criply & small.

I found *Lobelia Claytoniana*—*Gerardia purpurea*—*Lysi-*

machia ciliata, &c. Most every body in this place is inflicted with a bad cold or catarrh, which they call the influenza.

19.—Those days I spent in expectation of letters for my

20.—departure; not being able to account for the delay I

21.—was out of all patience, & if it had not been for want of money I should return to Philadelphia the nearest route I could find. I wrote the 21st to Dr. B. on the subject. I have not the heart of doing any thing for spleen & sorrow. On a walk I found near Onondaga court house, *Dipsacus laciniatus*? Willd.

22.—To day, at last, I received a letter I so long had looked for with anxiety, including 20 Dll. As my rent and expenses here were high, not much was left to me to go upon; but still when I am on the Road, I can make my way cheaper than when I stay at a place. I set about preparing myself immediately & beginn my journey to Vermont on Monday next.

23.—This morning I found myself very ill: the Influenza prevalent to a very high degree hereabouts got hold of me likewise, & attacked me with the most violent headache ever I have felt. I was forced to lay down; as soon as I got somewhat over the fever I got some Thoroughwort, set up with gin, which I used very freely, bathing my feet at night in warm water, & drank a large portion of sage tea.

24.—Felt somewhat better this morning, but affected with violent headache still; all appetit for eating lost.

25.—Somewhat recovered; headache ceasing; as I found people getting more & more sickly I concluded to leave this as soon as I could any ways be able to stand the journey.

26.)—Recovering some I prepared for leaving this to
27)morrow, with the stage, as I thought it the best way, in my present situation, to go on with it as far as it would be in my route.

28.—Having inclosed specimens, seeds & minerals in a good box, which I left to the care of Mr. Geddes, I settled my bill here, & in the evening went off with the stage, which only goes about 7 m. farther on from here.

29.—This morning we passed through the beautiful village of the Oneidas; it lays in a most charming situation. At night arrived at Utica; as the stage lays here over Sunday I had to stay to, which would give me a chance of seeing some of the plants of this neighborhood.

30. Took an excursion about the town. Among other common plants I observed here *Clematis virginiana*, *Inula helenium*, *Rudbeckia laciniata*, &c., but nothing worth any particular notice. In the walk I experienced the weakness which my sickness had occasioned, very much, which lowered my spirits very considerable, as I thought what a situation I must come to if I should fall sick now, & be deprived of going on in my pursuits. I really have never been more alarmed by my illness than I am now, which must be owing to the relaxation & debility of all the frame, which this Influenza occasions.

31.—From Utica I had about 50 m. to come where the road turns off to Johnstown, the route recommended me to go to Rutland & the heath of lake Champlain. I arrived at the falls of the Mohock, where we dined about 2 o'clock. While they were preparing dinner I took a short excursion back to the falls.—Here I observed *Verbena officinalis*, *Verbascum Blattaria*, *Mentha spec.* *Potamogeton natans* & several species of *Aster* & *Solidago*, all very familiar to me; different sorts of the more common ferns covered the rocks: viz. *Polypodium vulgare*, *Nephrodium dentatum*, *marginale*, &c. Here I left the stage & took up my lodging at the tavern for night, with intentions of going on towards Saratoga, on foot to morrow.

Sept. 1.—From Palatine church, where I stayed last night, I proceeded this morning on foot, to the left of the stage road. The road passes through a Pine woods, consisting chiefly of white Pine, & in place of beach & Hemlock. The *Coreopsis bidens*, or I suppose what is called now connate, got very common along the roadside, in wet places. In the same situation *Gnaphalium inundatum* is common; where the water is more plenty the *Leersia oryzoides*, among the species of *Juncus* & *Scirpus*, is a common grass. I observed, along fences, a species of *Galeopsis*, with flowers different from all the european, as I recollect. *Hydrocotyle americana* is common here.

After reaching Johnstown, a considerable village, I went on about 6 or 7. m. further, where I put up for night. Along the road sides here, *Tanacetum vulgare*, *Inula helenium*, *Sonchus canadensis*, &c., are common plants. In the valleys the productions are similar to the beach woods.

2.—This day I travelled through nothing but Pine Woods, interspersed here & there with barrens of Dwarf Oak (*Quercus prinus pumila*;) nothing new. The plants in flower, mentioned in the general Index, arrived at night at Balltown.

3.—Balltown springs lay in a deep hollow. The situation very romantick. I expected to get something curious about this place and Saratoga. The excursions about the grounds produced nothing new. I observed *Veronica*—*Anagallis aquatica*—*Bidens frondosa* & *bipinnata*—*Clematis virgin.*—*Buphthalmum helianthoides*—*mimulus alatus*—*Veroica scutellata*. The road from Balltown to Saratoga goes through barren pine woods, where I observed a species of *Hieracium*, which I suppose is called *H. scabrum*, Mich.—*Glycine comosa* is frequent. About Saratoga Springs, *Campanula erinoides*—*Rudbeckia laciniata*, several species of *Nephrodium*—*Spiræa salicifolia*—*Eupatorium maculatum*—*Cornium maculatum*? in great abundance.

One of the springs, calld the Rockspring at Saratoga, is a great natural curiosity. The rock projects, in the shape of a flat cone about 4. feet above ground, & has an aperture of about 10. inches in the middle, out of which they get the water, which is about 3. feet down & makes a continued noise, like it were boiling.—The country about here is barren, & not answering my expectations of finding some curiosities. The soil is full of limestone & the rocks chiefly consist of this & a granit, like wake, mixed with calcareous particles.

4.—Left Saratoga—the road through barren pine woods, mixed some time with Shrub Oak, *Podalyria tinctoria*, *Helianthus frondosus*—*Lobelia Claytoniana*, &c. Nothing new. Stayed over night 6. m. from Gleens falls.

5.—Gleens Falls are very interesting to see them. I detained myself for about two hours here, to see if I could not find something new on the rocks, but was disappointed. The

Juniperus comenunis, or else a variety of it, grows on the rocks below the falls. I got exceeding week & tired, & seeing a chance of riding in a wagon to Fort Ann, I took it. I arrived there at night fall.

6.—Rested myself at Fort Ann. *Potamogeton gramineum* & *natans*—*Humulus Lupulus*—a species of *Carduus*, with small flowers & very spinous leaves, calld here Canada thistle, begins here. It was quit new to me.

7.—From Fort Ann the road leads chiefly along the banks of Wood creek—with rocky shores of indurated clay & lime stone; high hills in sight on all sides—soil very stony & apparently poor. At Skeansborough, which is the head of lake Champlain, I made a short stay to examine the meadows & banks of the lake. *Lilium superb.*—*Iris virginiana*—*Sagittaria*—*Mimulus*—*Viburnum nudum*—*Lentago*—*Cephalanthus* & some more common plants mentioned in other places. I arrived at Fairhaven at night.

8.—The white pine is here the chief timber. I observed here in the woods a species of Willow new to me. All this day I travelled through cultivated lands on the side of the mountains. When I came near to Rutland I pased the Ira mountain, which appears to be a very interesting spot, & though necessity forced me to go on, I was determined to return to it some other day to ascend it. The timber here is chiefly Hemlock—Pine—Spruce—Beech—Poplar—Sugar Maple, &c.—no Oak. Arrived at night at Rutland, having travelled all day in the rain & fatigued myself to the utmost.

Sept. 9.—After enquiring in the Post office for letters for me & finding none, I took a small walk about the town. Observed nothing new to me. The road sides are covered with Canada thistle & *Verbena hastata*. It having not ceased raining, beside my not feeling very well after getting so very wett yesterday, I was obliged to keep the house & rest myself. Killington peak, which is said to be the highest part of Vermont, is in sight of the town & makes a very respectable figur. I wrote a letter to Dr. B. as I am destitute of cloathes & the weather beginning to get very raw & cold, I will not be able to stay long here unless I get means of buying cloathes fitt for the season.

10.—It clearing off very fine but the air very cold; a very

bad cold makes me afraid of having a relapse of Influenza. I felt so ill that I kept the house most all day.

11.—Feeling somewhat better, I dried how a good exercise on the mountains might agree with me. I set out after breakfast. The foot of the mountain begins about 2. m. from the town. In a Hemlock swamp I found *Cypripedium canadense* or *spectabile*—*Orchis latifolia*? *Nephrodium Dryopteris*, *Vaccinium hispidulum*. This plant had beautiful white berries like wax work. I don't know whether this plant all ways bears white berries or not, as I am but little acquainted with it. Most all the plants & shrubs mentioned on Pokono mountain & the beach woods grow here. In ascending the mountain I found *Epilobium angustifol.* in flower & seed. *Aster surculosus*, which I observed last season on Salt Pond mountain, grows in plenty here. *Aster flexuosus*, &c., & several species of *Solidago*, among which the principal sort is *S. canadensis*.

I ascended a very high ridge, near which one of the peaks is, but feeling weak & too much in apprehension of being obliged to stay out all night if I should attempt to ascent it, I deferred it to another day, when I might be better in health & more provided with cloathes to stand the cold weather over night. I took my route over the ridge & went a north course along the side of the mountain, for about 6. m. crossing a number of wild mountain creeks & brooks, seemingly very interesting for plants, but the season is too late; every thing worth notice has decayed & disappeared all ready, & the few plants I took notice of I had seen in abundance before. I arrived out of the woods in a road that leads over the mountains, & took up my lodging the first tavern I came to.

12.—Returned to Rutland again. I had collected yesterday a very singular species of *Equisetum*, which appears new. The *Medeola virginica* has here all ways a red centre, which Mr. Lyon took for a remarkable variety, but I believe it is all ways the case when the berries are ripe. Along the main street of Rutland I found a species of *Artemisia*.

14.—The morning very cold. I took an excursion to Meets falls. *Hamamelis* in plenty & beginning to flower. I observed all the flowers to be hermaphrodites. *Quercus*

alba in a dwarfish state. Oak timber is very scarce to be seen hereabouts. *Viola debilis* in flower; *Ilex canadensis*—A species of *Prunus* like *P. acuminata*, &c. I returned to Rutland very ill disposed: cold & without cloathes & money, & no letters arrived, made me more sick than I actually would have been.

15.—My illness turned out into a fever & bloody flux, which alarmed me very much in the present situation.

16.—Very cold night & morning. Killington peak was covered with snow; which stood all day, though the sun came out for several hours.

17.—By using several medicines I got so much better of the flux that I took a walk. I chewed most all day the tops of the branches of Spruce, which seemed to do good to me. *Populus candicans* & *balsamifera* are planted in the streets of Rutland, & grow about here frequent. I observed the *Verbena hastata* to be a truly didynamous & tetrandous plant. Got somewhat warmer to day.

18.—Took an excursion towards the mountain. *Aralia hispida* in berries—*Ilex canadensis*—*Orobranche virginica*—Observed *Aster infirmus*—*Circæa alpina*—*Xylosteum tartaricum*—*Gentiana saponaria*—*Axalia racemosa*, &c.

19.—Staid in the house, worn down with sickness & vexation of mind about not receiving any support whatever.

20.—However disappointed I had been in former excursions, I wished to ascend one of the highest peaks in this part. I went about 7. m. from here to one which is called Pico. Arrived there in the afternoon & spent the rest of the day on the foot of the peak, to ascend early in the morning.

21.—With a great deal of fatigue I ascended the peak, the morning very cold & damp. Observed nothing new; the Hemlock & Spruce towards the top of a cripply growth, being depressed by heavy snows & cold air & very difficulte to come through. My expectations being not answered I soon descended & returned to Rutland.

22.—Seeing no other means of getting away from here, than to contrive some way to get money to go on with, & pay my reckoning here, I, with great reluctance, sold my fowl-

ing piece this day. God knows whether the money will be enough to bring me on, but I must rough it through as well as I can.

23.—This night I received at last & almost to late, a letter. My mind has been made up to return as quick as possible to Philadelphia, & I will do it now, the letter notwithstanding.

24.—Left Ruttland.

25.—Through Timouth to Battonkill.

26.—Arrived at Troy.

27.—From Troy to Albany, & Baltimore, a small landing place.

28.—Come to Cattskill.

29.—When I came to Kingstown I took stage to New York, being to much tired to go on longer on foot.

30.—On the road to New York.

Octb. 1.—Arrived at New York.

2.—Rain.

3.—Seen the houses of the Botanick garden at New York.

4.—Left New York with the Packet.

5.—Arrived at Philadelphia wharf after 12 o clock in the night, & staid on board untill the 6, when I went ashore.

NOTES ON PURSH'S JOURNAL BY THE REV. WM. M.
BEAUCHAMP

At the head of the fly leaf of the little volume of 87 pages, which I have just copied and compared, appears the name of L. Leonora Goodrich, long the honored president of the famous Syracuse Botanical Club. Below this we read the autograph presentation of the book by her daughter:—"Presented to the Onondaga Historical Association, Syracuse, N. Y., by Mrs. J. G. Barker, April 28, 1923." At the head of the 39th page Mrs. Goodrich's autograph again appears. She was born July 2, 1831, and died April 5, 1923. The book was given her by Mr. Thos. P. Jones, for whom it was privately printed in 1889, as an appreciation of her valued local work. She was long a director and librarian of the Onondaga Historical Association, and in 1912 issued the

FLORA

Of Onondaga County as Collected by the
Members of the

SYRACUSE BOTANICAL CLUB

COMPILED, CLASSIFIED AND
CATALOGUED BY

Mrs. Leonora Hutchinson Goodrich
President of Syracuse Botanical Club
1912

Printed by
THE McDONNELL CO.
Syracuse, N. Y.

A few additions have been made to this and more should follow, but it represents a great and painstaking work, in the face of many difficulties. Since the middle of February and the end of April, 1923, the Club has lost four faithful members.

In editing a new edition of Pursh's Journal, which covers about 4½ months of the year 1807, my method has been to

commence in the spring and end in the fall, some days getting little attention, and others a good deal. I have made some changes in punctuation and corrected some evident errors. Apparently Pursh never wrote "and," and always used Y for J in journey. Such changes in use may be passed over as of little consequence. It is curious, however, to see how small a field Pursh explored in this county. He went to Oswego, indeed, but for the most vibrated between Onondaga Hollow and Salt Point. He found the Scolopendrium on the Geddes farm but knew nothing of Scolopendrium Lake and other haunts of that and other rare ferns. He heard nothing of Rockwell Springs or the great Cicero Swamp, though he did reach Liverpool. He confined himself to a small and disagreeable field while unseen floral treasures lay all around him. There were difficulties, of course.

I find that he was fairly equipped for his work. He had a pocket compass. Incidentally I learn that he had a pair of shoes as well as boots; then that he had a tin box for specimens; then that he had a fowling piece, which he valued much but never used. I wonder why he carried it around. A squirrel he killed I suppose died in some more primitive way.

Mr. Pursh resided as a botanist in the United States, 1799-1811, and published *Flora Americæ Septentrionalis* in London, 1814, before his return to Canada, where he hoped to prepare a Canadian Flora.

These notes of the Pennsylvania, New York and Vermont journey follow.

He made a good beginning by taking his baggage to the station, May 26, and remaining with it over night, thus getting a fairly good seat when the crowded coach left at 4 o'clock in the morning. At Easton he saw the attractive sign of the Golden Swan. A good bed and a swan's down quilt! What a charming prospect for a weary man. He rested well that night.

May 28 he left the stage, crossed the Lehigh river and did some botanizing, had a good time but no wonderful results. The next day he went up the Bush Kill and found the Leather wood, much more frequent farther north.

RECEIVED
FEB 4 1874

May 30, he was impressed by the scenery and said not a word about plants. Geological changes in river formation gave him food for thought, as he trudged on, but he was not well informed in deeper geological questions. However he hoped to examine the Water Gap quite closely the following day, but failed in this. The next day also was rainy, and thus he was not impressed with the grandeur of the scene.

June 2 he did some botanical work but found nothing new, and this was the case the next day, when he climbed the rocks at the Water Gap. He described the latter in detail and mentioned all the plants he saw.

June 4 he was still at the Gap, where he reasonably thought there might have been a great cataract in earlier days. The next day he ascended the valley to the Minisink country, which was in New York and New Jersey. Rutenber said of this name, "Minnisink is from Minnis, *an island*, and *ink*, locality . . . The name has a very general application to lands, in Pennsylvania as well as in New York, known as the Minnisink country. It had its origin in the tradition that the land was covered with water and broke through the mountain at the Water Gap or Pohoqualin, and is said to mean the land from which the water is gone." This can only be sustained by going back to the primary meaning of an island as a dry place. In my Chipewewa New Testament Minisink is used for an island. This day he found *Podophyllum* called Mandrake. Nothing special for several days.

June 9, he found *Pyrola umbellata* taking its N. Y. name Prince's Pine. The next day the Beach woods are mentioned. This is always Pursh's spelling, but Mr. James occasionally corrects this and I find no fault. Two days later he wisely got rid of his trunk. He then determined to go by way of Wilkesbarre and Mount Pokono, there being, on the top of the latter, some large and attractive swamps.

June 13.—For the first time he mentions *Orchis bifolia*, but found but one plant. Later he found many and gave a very full account of it. It is rare here, but I will speak of it again. He found a good road to the top of Pokono, which is now a favorite summer resort. He was delighted with the flowers. One *Trillium* he called *T. pictum* on account of the red stripes at the base of the petals. It is one of the

loveliest of the species and is found here. The Trailing Arbutus grew there, too, a commoner plant here than many suppose. When he left the mountain top he soon came down to common things again.

With Wilkesbarre he was charmed and foretold a great future for it. Of course the ferns he found in the coal slate were not the modern ones he supposed, but they delighted his eye, even while they lacked the rich hues of a later life. He visited a coal pit, but in the little mining done methods were rude. Here he became very weak and ill, and was no better for many days. Naturally his old remedies failed when he would not give up work and at last he realized that he was in a very dangerous condition.

His account of *Oxalis acetosella*, as found here, differs greatly from any I have seen. One curious aid he used at times, a fl. for anteflowering; p. fl. for post flowering. June 26 he gave his elaborate account of *Orchis latifolia* which at Hopbottom was called Allheal. The Pigeon Pea, at the same place, seems to have been the Squirrel Corn. The next day he was told of quite white *Cypridediums* in a Cranberry marsh, which he thought, from the description, related to *C. acaule*, as it probably was, such a distinct variety occurring in Onondaga county.

Chenango Point (July 1) is now Binghamton, and I remember it as a pleasant and flourishing village in 1850. In 1860 its population was 8,818; and it is now a city of importance. Its first name came from the Chenango river, which passed through it. Chenango, as an Onondaga name, means Bull Thistles. He came next to Owego, an early Indian name which, according to Morgan, means Where the Valley widens. It was in the Cayuga territory, and in the historic period the Cayugas shifted their village there about the mouth of the creek as convenience required.

Tioga Point is at the confluence of the Chenango and Susquehanna rivers and has historic importance from its connection with the Sullivan expedition in 1779. The name means At the Forks, or perhaps more exactly, Meeting of the Waters, thus forming a point or fork by the union of two large streams. The Iroquois give this name to several places in New York. Some mistakenly translate it A Gate. This is not the meaning and a much longer word would be

required, but, on the other hand, through this historic gateway the N. Y. Iroquois sent their war parties against their southern foes.

July 6th he left the Susquehanna valley and went northward up Cayuta Creek. This Iroquois word meant simply a creek or river, and it was the outlet of Cayuta Lake. This day he found a lily which he described because he did not remember its name. I call it the Wood Lily, because I have found it only in woods; Mrs. Goodrich preferred the Red Lily from its color. Both names are in common use.

On the 7th he got a ride, but for the most part of the way merely placed his impedimenta in the wagon, which he could easily outwalk. In Sapony Hollow he found traces of somewhat recent Indian occupation. The Saponies were a southern tribe, adopted by the Cayugas, but changing their village sites often. They were still at Sapony Hollow in 1771, and for some time longer. Here Pursh saw the *Magnolia acuminata* for the only time in his trip. I shall speak of this again.

July 8.—The beautiful gorge and waterfall which so charmed Pursh, on the north side of Cornell University, is well worth a visit, even if it involves hard climbing. I correct here an evident mistake. He wrote interesting when he meant the reverse. The next day he observed the Mulberry cultivated in orchard rows. It was extensively advertised more than 80 years ago, and on a place I owned in Skaneateles, 65 years ago, trees still grow in rows. These were of the white fruited kind, and quite delicious.

Hardenburgh's Corners had the name changed to Auburn in 1805, but this did not immediately affect general use. Owasco, for the lake and outlet had this name from early days, varying slightly in form, but persistent in meaning. Cammerhoff, in 1750, wrote it Achsgo, as a Moravian naturally would; Charlevoix called it As-co; A. Cusick gave it to me as Os-co, Bridge over Water, and Morgan wrote it Was-co, Floating Bridge, from the Cayuga dialect. It is probable that there was a permanent bridge there, of some kind, in quite early days, but with the use of horses there came a change, and a simple bridge was made only when needed.

Skaneateles is one form of an Iroquois word, meaning long lake. The Cayuga and Onondaga dialects eliminate the l.

Onondaga, On the Mountain, in old times had Ronon added, to express People. As a place name it varied slightly in form.

While he talked with many, Pursh mentioned the names of but three residents of Onondaga County: John Adams, his landlord, but once; Squire Geddes and Captain Webster, several times but without their first names. James Geddes was born in Carlisle, Pa., July 23, 1763, and first came to Onondaga in 1793, to see the salt springs, was well pleased, returned home and organized a salt company, and in 1794 came back by way of Seneca Lake, well equipped with salt kettles, founded the village of Geddes and built his salt blocks there. Dr. Barton may have been one of the stockholders.

To know anything of Onondaga was to know about Ephraim Webster, and I need say nothing more of this interesting man, save to say that one purpose of my editing this journal is to carry out his promise to Pursh, which circumstances prevented his fulfilling. In fact they met no more after that day.

July 12, Pursh saw the salt springs for the first time and gave an interesting account of them, somewhat different from what Father LeMoyne found, Aug. 16, 1654, when he said: "We arrive at the entrance of a small lake, in a great basin half dried; we taste the water of a spring which they dare not drink, saying that there is a demon within which renders it fetid; having tasted it, I found that it was a fountain of salt water; and in fact we made salt from it as natural as that from the sea, of which we carried a sample to Quebec." Thus commenced the manufacture and exportation of salt from these springs.

On this day he first mentioned his useful botanical tin case.

July 14, he visited Webster, who was not then living on his Mile Square, at the Hollow, but three miles south, on his 300 Acre Tract. There I once met his youngest son, Halen, about 80 years later.

On his second visit to Webster, July 18, came the mention of Onondaga names of trees and herbs, and also of the deadly *Cicuta maculata*, found then throughout Onondaga and still frequent on the Reservation. We yet hear of fatal results from chewing or eating the root. It is frequently mentioned in Seneca stories and distinguished as "the root."

July 20 was a memorable day, for he had a guide and made a wonderful "find." Mr. Geddes took him to a rough and dangerous place where he found the *Scolopendrium* or Hart's Tongue Fern. He did not know, indeed, that it grew in abundance within a few miles, but if he had known that a hundred years later, all the botanists of the United States had been unable to find more than three stations for it, in all North America, he might have shown more elation. He asked one question: "Is the European auriculated at the base, like this species?" Now I find no difference in the base of our plants when compared with an English specimen lying before me, though the frond is a little wider. But Mr. H. E. Ransier, of Manlius, has examples where the auricle, on either side, becomes a pointed projection, giving the whole frond a kind of halbert-like appearance. Was Pursh's query suggested by finding fronds of this unusual type? The whole rocky gorge was full of botanical treasures.

In 1880, at Hon. George Geddes's desire, the S. B. C. went to the Geddes Gorge and re-discovered it after the lapse of 73 years. Mrs. G. said it was afterward found at Jamesville and Chittenango Falls, a slip of the pen, for A. Gray, 1848 edition, mentions the Chittenango Falls station as then well known. I myself got this fern at the Jamesville Green lakes, Aug. 3, 1881, and met a botanist looking for it at what is now Green Lake Park, June 11, 1866. He came from a distance but he knew it was there. It is usual to class these neighboring stations as one group.

July 30 he was fairly on his way to Oswego. Below Three Rivers Point he found plants of *Anona triloba*, the North American Papaw, east of its usual range and never reported here since. Next day, near Oswego, he saw *Hydrocotyle umbellata*, but without flowers. It is one of the rarest of Onondaga plants. He had a disagreeable time, and "was not able to get one civil man by whom" he could get desired

information. I doubt whether, from what he said, he was very civil himself. He had a sore toe, poor man, and thus "the place altogether was disagreeable to" him. He took a boat and went up the river.

In spite of all he accomplished it is interesting to see how much he missed. Near Oswego Falls he saw the white Water Lily for the first and only time in his Onondaga wanderings. There, too, he found a few of the Scarlet Cardinal flowers. The full omissions are many in number. Birds were out of his line but he did mention the beautiful wood duck. The Chara in the Onondaga outlet, which the boatmen called Feather Beds, I have been unable to identify by Pursh's usual name.

Aug. 12 he went to Pompey Hill, where a military parade was going on. He said it included a draft of militia, a new idea to me. He was boy enough to watch the parade all the afternoon. The next day he went to Pratt's Falls, which interested him greatly. He thought them over 300 feet high, the actual height being 137 feet. On the 17th came a militia parade at the Hollow, but, being unwell, he took no interest in this, and on the 29th he left the place, going to Lake Champlain by way of the Mohawk valley and Saratoga. At Fort Ann, Sept. 6, for the first time, he saw the Canada Thistle. The limit of his journey was Rutland, Vermont, where he sold his gun. Luckily he had a remittance on the 23d and thus reached Philadelphia, Oct. 6, in comparative comfort, though walking much of the way.

ONONDAGA INDIAN NAMES OF TREES, PLANTS
AND FLOWERS, RECEIVED BY REV. W. M.
BEAUCHAMP FROM ALBERT CUSICK,
SA-GO-NA-QUA-DE

My good friend, Albert Cusick, one day showed me his first attempts at recording and translating Indian names. He had done work of this kind for another of my friends, Dr. Horatio Hale of Canada, in the preparation of "The Iroquois Book of Rites." In this Mr. Cusick was an intermediary between Dr. Hale and some Onondaga chiefs, not so much translating words and sentences as eliciting information and solving difficulties. Dr. Hale already had a

manuscript copy of the Iroquois Condolence, with a fair translation, but came to Onondaga twice to perfect this for publication.

For his own purposes Mr. Cusick had also a plan which he laid before me. He was fond of flowers, and wished to record the Onondaga names of some of these, but to add to their value by giving the primitive meaning of the names. Of course he soon found the limitations. First meanings were often lost and the name was a name and nothing more. After that we worked together, gradually enlarging our field of action, but since his death I have done but little.

The proper listing of names would follow botanical lines, but the more convenient alphabetical mode will be used here, and minor matters will be cared for. I take some words from Zeisberger and others, but indicate but a few of his. Cusick's are syllabled.

Acorn.—O-so-kwah. (Z.) Orichtizera.

Adder's Tongue or Dog-tooth Violet.—Je-gah-kwi-tah. The Tuscarora name for this is Yu-tya-nah-re, Crooked shin.

Alder, Black.—Ka-nus-ta-che, Black stick. It may be Acer or Viburnum, but I do not quite make it out. Described as a shrub or small tree, with leaves like a maple but with black bark.

Alder.—Too-see-sa.

Anise.—Os-ta-yah.

Apple-tree.—Swa-hu-na, Big Apple.

Apple, Wild Crab.—O-yah On-we, Real Apple or fruit; i. e. Original Apple.—Transferred also from the wild to the Siberian Crab Apple.

Ash, Black or Swamp.—Ga-hoon-wa-yah.

Ash, White.—Ka-nek, and also a variety growing by water and used for baskets—Ka-neh-ho-yah, Another kind of Ash.

Ash Tree.—Ka-hen-we-yah. This differs a little from another form, and may refer to a boat.

Ash, Prickly.—Ke-un-ton.

Aspen.—Nut-ki-e, or Noisy leaf.

Aster, Wild.—Ka-sa-ha-yen-tuk-wah, It brings the frost.

Balsam Fir.—Cho-koh-ton, Blisters.

Bark.—O-skon-tah. Also Rough Bark.—Go-en-wa.

Barley.—Ta-ka-no-ska-e, Long whiskered.

Barren Tree.—He-yah-ten Wah-tah-yone-yah-hah.

Basswood.—Ho-ho-sa, It peels. The bark was used in covering cabins, and the inner for cords.

Beans.—Os-sa-ha-tah. Beside use in food, they were used as counters in games.

Beech Tree.—O-ech-keh-a.

Beech, White.—(Z.) Sraquaris.

Beech Drops.—Och-ke-ah-kik-hah, It grows on beech grounds.

Berry.—O-yah.

Berry, Partridge.—Noon-yeah-ki-e-oo-nah-yeah. The first four syllables stand for the bird.

Berry, Sheep.—Tone-da-we, Bushes in a cluster.

Berry, Black.—Sa-he-is, Long Berry.

Berry, Huckle.—O-hyah-che, Black Berry.

Big Tree.—Ne-ah-te-en-tah-go-nah, Oneida council name.

Birch Tree.—Oo-nah-koon-sah.

Birch for Canoe.—Ga-nah-jeh,kwa, Birch that makes canoes.

Bittersweet.—Ko-noon-tas, Stick that makes you see.

Black Walnut.—Dyut-soo-kwa-no-ne, Round nut.

Blossom, To.—Ah-weh-ha.

Boughs.—O-en-gah.

Boughs, Along on.—Osgohageshon.

Bower, He made.—Wahanoshen.

Bower, She made a.—Waenoshen.

Box Tree.—Ka-hone-sa.

Braid of Corn.—Kah-sten-sa.

Bramble.—Sajis ohunta.

Branch.—O-en-gah.

Brushwod.—Ode-ko-hah.

Buckthorn.—Ohecta.

Buckwheat.—Te-ya-nah-cha-too-ken-ha, Square seed, i. e. angular.

Bud.—Ose-kwa-yeah.

Burdock.—Oo-nu-kwa-sa-wa-nehs, Big burr.

Bush.—O-hoon-tah.

Butterfly Weed.—Ah-wa-hi-da-gah.

Butternut.—Oo-sook-kwa.

Butternut Tree.—Oo-a-wat-hah.

Buttercup.—O-jeht-kwa-ne-ah-wen-ho-tak.

Cabbage.—Oo-na-soo.

Cardinal Flower.—Ah-wen-ha-tah-kee, Dark red flower.

Carrot.—O-jeet-kwah-ne-uk-ta-ha-ta, Yellow root.

Catkins.—Ta-koose, Little cats, or kittens.

Cat Tails.—Oo-na-too-kwa, Rushes that grow high, or Plenty of flags growing. Perhaps Much rushes in the Onondaga idiom, applying to either size or quantity.

Catnip.—Ta-koos-ka-na-tuks, Cat-eating leaf.

Cedar, White.—Oo-soo-ha-tah, Feather leaf.

Cedar, Red.—O-nen-don-da-gri.

Chestnut.—O-ha-yah-tah, Prickly burr.

Chestnut, Horse.—O-ha-yah-tah-goo-na, Great prickly burr.

Cherry.—He-ri.

Cherry (fruit).—Eri ochia.

Cherry Tree.—Eri.

Cherry, Wild.—A-e.

Cherry, Red.—Ja-e, Perhaps attempt at English name.

Cherry, White.—Ja-e-goo-nah.

Cherry, Choke.—Ne-a-tah-tah-ne, Somethink that chokes.

Claytonia or Spring Beauty.—Ko-sah-tes-kon-kose-kas,
Like something stale.

Clematis.—Ka-nok-we-en-tah, Foggy, or Like the opened
head of the Cat-tail.

Clover, Red.—Ah-seh-ne-u-na-toon-tah, Three leaves.

Clover, White.—Add word for white.

Cluster.—Ote-ho-kwah.

Cluster of Grapes.—Ojinqisere.

Cohosh, Blue.—Oo-kah-ta, Not ripe. Applied to red and
white kinds also.

Cohosh.—Ka-koh-sah-tes-kas, Smells like a horse. Un-
certain of kind.

Cord-wood.—Ta-ka-en-ha-tah.

Cork.—Ka-che,hah, To stop up hole.

Corn.—O-ne-hah.

White Corn.—O-na-hah-ka-ha-tah.

Corn-cob.—O-no-kwen-yah.

Corn-husk.—O-no-yah.

Corn leaves.—Jo-wah-ses.

Pop Corn.—One-ten-son, or Wah-te-sunk.

Corn Meal.—O-chet-kwi-kon-ot-hach-ha.

Corn, Ear of.—Onuchquaja.

Corn ladle.—Ken-sto-kwah.

Corn basket.—A-nen-oh-hite-ah.

Cowslip, or *Caltha palustris*.—Ka-rah-wah-hawks, It
opens the swamp.

Cranberry.—A-to-ka.

Creeping Blackberry.—O-kah-hak-wah, Eye, or Eyeball.

Crinkle Root, (Dentaria).—O-ech-ken-tah, Braid, alluding to zigzag roots.

Cucumber.—Oot-no-skwi-ne, With prickles on it.

Currant.—Ska-hens-skah-he.

Daisy, Ox-eye.—Ko-hen-tuk-wus, It takes away your field. Applied to weeds.

Dandelion.—O-we-wen-sah.

Dicentra, Dutchman's breeches and Squirrel corn.—The name for both is Hah-ska-nah-ho-ne-hah, Food for ghosts, or Ghost corn.

Dogwood, Flowering.—Kaw-see-saw.

Down of Cat-tail.—O-nah-kwe-ah.

Elder Bush.—Os-sa-ha, Frost on the bush.

Elecampane.—Ook-to-ha-wa-ne, Big root. Also called Ko-a-wa-soont-hap, Flower coming from Sunflower.

Elm.—Oo-koh-ha-tah.

Elm, White.—Ohoskera.

Elm, Swamp.—Garatkwa.

Elm, Great Swamp.—Ga-yut-kwa-go-na.

Elm, Red or Slippery.—Oo-hoosk-ah, It slips. The rude Iroquois canoes were made of the bark when it slipped in the spring.

False Mitrewort.—Oo-goon-why-e, Hairy. Same name as the peach.

Flag, Sweet.—Oo-a-hoot-tah.

Flax.—Oo-skah, Thread-like, or Making threads.

Flower.—Ah-weh-hah; in Oneida it is Ozizio.

Flowers, It is full of.—Awehahagi.

Flowers, It has full-bloom.—Deiawehahagi.

Forest.—Kah-hah. Add go-na for great.

Forest Spruce.—Onoehntonnie.

Fruit.—Ohia or Ochia.

Fruitful.—Ka-wah-che-a-wan-ne.

Fungus on trees.—O-nah-sah. Applied also to a cock's comb, which it resembles.

Gentian.—Garoentoge.

Ginseng.—Da-kien-too-keh, Forked plant. In Oneida, Ka-lan-dag-goo. It is curious that Zeisberger, who dug and sold this at Onondaga, left no name for it.

Golden Rod.—O-yun-wah.

Gooseberry.—Ska-hens-skah-he-goo-na, Large currant. The wild kind adds something to express the thorny fruit.

Grain.—O-nah-cha.

Grape, Wild.—O-heunt-kai-sa, Long vine, and well named. Add Goona for cultivated vine, and it becomes Large Grape.

Grass at full height.—O-win-o-kah.

Grass, short, as in turf.—O-je-go-chah.

Grass Land.—As-ton-da-yakt-hah.

Green Osier, (*Cornus alternifolia*).—Twa-ha-he-he, Broken flower or leaf.

Ground Hemlock.—O-ne-te-o-ne, Hemlock that lies down.

Grove.—O-hen-da-ha.

Harvest.—Ha-yent-whah-kwas.

Hazel Nut.—O-nya-stah in Seneca.

Hazel, Witch.—Oo-a-nah-kwe-hache, Spotted stick.

Hemlock Spruce.—O-ne-tah, Greens on the stick.

Hemp.—O-se-kah, To make cloth of.

Hepatica, or Spring Beauty.—Che-che.

Herb.—Hahwennokera.

Hickory, Shell or shag bark.—A-nek or Anonoka. Morgan

also gives O-nan-no-gi-is-ka, for Shag Bark Hickory, as place names for Cortland and the Tioughnioga river, O-nan-o-gese, Long Hickory for Apulia, perhaps meaning tall. Baptist Thomas, however, gave me O-ne-a-no-ka-res-geh, as Hickory Grove, somewhat resembling the last.

Hickory, Bitter Nut.—Us-teck. Morgan has Us-te-ka, thus defined, as a place name for Marcellus and Nine Mile Creek. Zeisberger has Anonoka as a general name for the hickory nut.

Hop.—Ah-weh-hah, Flower. In Oneida, Ojejea.

Hound's Tongue.—Teu-te-nah-ki-en-tun-so-noo-kwa-ya, or Sheep burr, the first six syllables meaning sheep. This is the Tory burr of my boyhood.

Huckleberry, Black.—O-yah-chee, Blackberry. The same for the Blue.

Huckleberry, Black.—O-kwa-yes-yah, Bearberry.

Iris, Wild.—Oo-wa-hoot-kwa, Like Cat-tail and Sweet Flag.

Iron Wood.—Skien-tah-gus-tah, Everlasting wood.

Ivy, Poison.—Ko-hoon-tas, Stick that makes you sore. Usually rendered Poison. Bitter Sweet and Virginia Creeper the same.

In the Woods.—Kah-hah-goon-wah.

June Berry or Shad Bush.—Ka-ton.

Juniper.—Onendionni.

Jack in the Pulpit.—Kah-ah-hoon-sah.—Indian Cradle, from resemblance to cradle board and child.

Kernel of Corn, or Nut.—O-ny-a-ah.

Lady's Slipper or Cypripedium.—Kwe-ko-hyah-o-ta-kwa, Whippoorwill Shoe, which is also a Connecticut name.

Leaf.—O-na-tah.

Leatherwood, *Dirca palustris*.—Che-ka-se, *Rotten wood*. A Tuscarora name for this. Cusick said it was all a tough bark.

Leeks, in low lands.—Oo-noh-so-yah, A queer Onion.

Lettuce.—Oo-na-tah-kah-te, Raw Leaf; i. e. eaten raw.

Limb of Tree.—O-en-kah.

Locust Tree.—O-neh-ta-gwen-ten or Sa-ya-des.

Log.—Ka-ine-tah. The Log floats.—Ga-en-do.

Maize.—Oo-ne-hah.

Mandrake.—O-na-when-stah, Soft fruit.

Maple, Soft.—Ah-weh-hot-kwah, Red flower, from Ah-weh-hah, Flower, and Hot-kwah, Red.

Melon, Water.—Oo-nyo-sa-hah-te, Green Melon, or Melon eaten raw.

Melon, Musk.—Wah-he-yah-yees, Thing that gets ripe.

Milk Weed.—O-wah-kwen-stah, Milk that sticks to the fingers.

Mulberry, Red.—So-yes, Long berry.

Mulberry, Fruit of.—O-hi-a-ri.

Mullein.—Ki-sit-hi, Flannel, and Oo-da-teach-ha, Stockings.

Mushroom or Toadstool.—O-yah-ken-tah.

Muskrat Root or Water Hemlock.—O-nah-san-a.

Mustard, Yellow.—Ko-hen-tuk-wus, It takes away your field.

Nettle.—O-yen-ha-tah, Hairs that will catch you if you are not careful.

Nut.—Oo-sook-wah.

Oak.—Ki-on-da-ga.

Oak, White.—Ki-en-tah-ken-ah-tah, White-looking tree.

Oak, Black.—Ga-ron-ta-sun-tah.

Onion.—Oo-noh-sa. Garlic the same.

Onion, Wild.—Oo-noh-sah-kah-hah-koon-wa-ha, Onion that grows in woods.

Osier, Red.—Kwen-tah-ne-yu-hoon-to-te, Red Tree.

Pansy.—Tent-kah-kah-ha, He looks at me.

Parsnip.—O-ta-ra-ga-wi.

Parched Corn.—One-ha-tah, Baker corn flour.

Partridge Berry.—Noon-yeah-ki-oo-nah-yeah, The first four syllables stand for the bird.

Peach.—Oo-goon-why-e, Hairy.

Peach Stone.—Gone-twi-e-o-nen-stah, Hairy seed.

Pear.—Koon-de-soo-kwis, Long life.

Peas.—O-na-kwa.

Pepper.—Ta-yu-side, Sour stuff.

Peppermint.—Kah-nah-noos-tah, Colder, or that which makes cold, from first sensation.

Pine.—O-neh-ta, Like porcupine holding to a stick.

Plant.—Wah-ni-o-ta or A-hen-ni-o-tin.

Plantain.—Tu-hah-ho-e, It covers the road, in allusion to the white man's foot.

Plantain, Heart-leaved.—Juk-ta-ha-gah-te, Half-root. A Seneca name for a Tuscarora medicinal plant.

Poke Weed.—Oo-ju-gwah-sah, Color weed, their principal vegetable dye.

Poplar.—Sque-jo-na, Large flower, Zeisberger's Onondaga name for this tree. The name and definition clearly show he had the Tulip tree in mind.

Pop Corn.—One-ton-son or Wah-te-sunk.

Pleurisy Root or Butterfly Weed.—Ah-wa-hi-da-gah.

Plum, Wild.—Ka-ha-tak-ne, Dusty fruit.

Plum, Wild Red.—Tis-cho.

Plum Tree.—Thi-chi-onk.

Pumpkin.—Oo-new-sah-oon-we, Real Melon or Pumpkin; i. e. Original.

Raspberry, Red.—Oo-nah-joo-kwa, Cap. The definition suggests *R. odoratus*.

Raspberry, Black.—Teu-tone-hok-toon, That which bends over.

Red Maple.—Oot-kwen-tah-he-an-yo, New growth is red; a name for a small variety.

Rose, Wild.—Ah-we-ha-tah-ke, Red flower. Also Ko-tot-hot-ah, It stops diarrhœa, from medicinal virtues.

Samphire.—O-hyah-gwe-yah, Fingers. Commonly with kit-kit, thus meaning chicken's fingers.

Sapling.—O-den-don-ni-a.

Sarsaparilla.—Ju-ke-ta-his, Long root. Some other plants the same.

Sassafras.—Wah-eh-nah-kas, Smelling stick.

Shrubs.—O-de-ko-hah and O-hoon-tah.

Spice Bush.—Da-wah-tah-ahn-yuks, Stick that breaks itself or is brittle.

Sprout.—Wah-ten-hine-ya.

Squash or Pumpkin.—Oo-new-sah. Distinctions, as with us.

Strawberry.—Noon-tak-tek-hah-kwa, Growing where the ground is burned, or Knoll burned.

Succotash, Boiled.—O-ne-ho-kwa.

Succotash, Dry.—O-no-na-tah.

Sumac.—Ote-ko-tuh, or Ot-go-ta, Witch stick.

Sunflower.—O-ah-wen-sa, or O-a-wen-sa.

Sycamore.—Oo-da-te-cha-wun-nes, Big stockings. Also Ka-nen-skwa.

Stone Root, or Collinsonia.—Hunt-gas-kwah.

Teasel, Wild.—Gan-at-tah, Comb; also, cultivated, A-yen-sa-nyt-ha, It cleans cloth.

Thistle.—Ooch-ha-ne-tah, Something that pricks.

Thistle, Bull.—Ooch-ha-neh-too-wah-neks, Many big thistles.

Thistles, Canada—Ooch-ha-ne-tas-as, Small thistles.

Thorn Bush.—Je-kah-ha-tis, Long Eyelash, from the long thorns.

Timothy Grass.—O-teh-a-hah, Tail at the end.

Tobacco.—O-yen-kwa. Add Hon-we for Real Tobacco. *Nicotiana rustica*, the native species, still cultivated and used in ceremonies.

Tree.—Kai-ehn-ta, Schoolcraft has it Kai-un-ta, but early writers retain the R, making it Ga-ron-ta, as the Senecas still do.

Tulip Tree or Whitewood.—Ko-yen-ta-ka-ah-ta, White-wood.

Tree, Barren.—He-yah-ten Wah-tah-yone-yah-hah. A flowering tree producing no seed.

Tree Trunks, Long.—Ga-en-he-djis.

Tree, He has a standing.—Ho-da-he.

Trillium, White.—O-je-gen-stah, Wrinkles on the Forehead.

Trillium, Purple—Kwen-tah Ne-yah-wen-ho-ten O-je-gen-stah, Red Wrinkles in the Forehead. The red and white Trilliums are said to be husband and wife, and the same idea is held of other related plants.

Turf.—O-cha-ko-cha-ka, Green place.

Turnip.—O-je-kwa, Round or Hammer root.

Twig.—Ote-ko-hah.

Violets.—Ta-kyah-noon-wi-tahs, Two heads entangled, from a childish game.

Water Hemlock.—O-nah-san-a, *Cicuta maculata*. A poisonous root.

Weed.—A-wen-no-ka.

What we live on.—Tune-ha-kwe. Applied to corn, beans and pumpkins collectively. Personified they are Supporters of Life.

Wheat.—O-nah-cha.

White Cedar.—Oo-soo-ha-tah, Feather Leaf, which is pretty and appropriate.

Willow, Dwarf.—O-chik-kwah-ne-yo-ton-kwah-hah.

Willow, Late Gray.—Oe-seh-tah, or O-set-ta.

Willow, Yellow.—Cheek-kwa-ne-u-hoon-too-te, Yellow Tree.

Wintergreen. — Kah-nah-koon-sah-gas, Birch-smelling plant.

Wood.—O-e-un-tah or O-i-en-da, Wood for fuel.

Woods, In the.—Kah-hah-goon-wah, the last two syllables implying greatness.

ONONDAGA AND OSWEGO PLANTS FOUND BY PURSH IN 1807. NAMES AS USED NOW

Abies Canadensis—*Actæa spicata*, var *alba*—*Acer saccharinum*, *rubrum*—*Amaranthus albus*—*Andropogon* . . *Alisma* *Plantago aquatica*—*Anthemis* *Cotula*—*Apocynum cannabinum*, *androsæmifolium*—*Arabis falcata*—*Apios tuberosa*—*Arisæema tripyllus*—*Aselepias tuberosa*, *Syriaca*, *incarnata*, *umbellis*—*Asimina triloba*—*Asplenium angustifolium*.

Batrachium tricophyllum—*Blitum capitatum*—*Boehmeria cylindrica*—*Botrypus Virginicus*—*Bupththalmum* (*Barrichia*) *helianthoides*.

Campanula aparinoides—*Camptosorus rhizophyllum*—*Carduns lanceolatus*—*Carpinus Americanus*—*Castanea vulgaris*—*Caulophyllum thalictroides*—*Ceanothus Americanus*—*Cephalanthus occidentalis*—*Cerasus Virginiana*—*Chenopodium anthelminticum*—*Chrysoplinium Americanum*—*Cicuta maculata*—*Cimicifuga racemosa*—*Circæa alpina*—*Clematis Virginiana*—*Convolvulus arvensis*—*Cornus alternifolia*, *candidissima*, *stolonifera*, *paniculata*, *scabrosa*?, *striata*, *albida*?, *florida*—*Cratægus Crus-galli*—*Cynoglossum officinale*, *Virginicum*.

Dalibarda repens—*Decodium verticillatum*—*Desmodium nudifloram*, *acuminatum*—*Dipsacus sylvestris*—*Dirca palustris*.

Echinosperrum Lappula—*Elymus Canadensis*—*Epilobium angustifolium*—*parviflorum*?—*Equisetum sylvaticum*—*Eupatorium perfoliatum*.

Galium verum, *cirzæans*, *lanceolatum*, *trifidum*—*Gaylussacia frondosa*—*Geranium Robertianum*, *Carolinianum*—*Gerardia flava*, *purpurea*—*Geum triflorum*—*Gnaphalium uliginosum*—*Gymnocladus Canadensis*.

Hamamelis Virginiana—*Helianthus squarrosus*—*Hibiscus moscheutos*—*Hieracium Canadense*—*Hydrocotyle umbellata*—*Hydrastis Canadensis*—*Hydrophyllum Canadense*—*Hyoscyamus niger*—*Hypericum perforatum*—*Habenaria orbiculata*—*Hydrocotyle Americana*.

Juncus palustris — *Jungermannia*? — *Justicia* (*Rhytidoglossa*) *pedunculosa*.

Lathyrus, various—*Lilium superbum*—*Lithospermum latifolium*, *arvense*, *canesceus*—*Lemna trisulca*, *polyrhiza*—*Lobelia cardinalis*, *spicata*—*Lonicera glauca*, *Tartaricum*—*Lycopodium complanatum*, *Lucidulum*—*Lysimachia striata*, *ciliata*.

Meibomia grandiflora, *nudiflora*—*Mimulus alatus*—*Mollugo verticillata*—*Monarda didyma*, *fistulosa*.

Nymphea odorata.

Onosmodium Carolinianum—*Osmunda regalis*—*Ostrya Virginiana*—*Oxygraphus Cymbalaria*.

Phryma leptostachya—*Phsegopteris*, *Dryopteris*, *polypodioides*—*Plantago major*—*Polygonum aviculare*, *Persicaria*, *amphibium*—*Polymnia Canadense*—*Populus heterophylla*, *tremuloides*, *candicans*—*Pontederia cordata*—*Potamogeton natans*, *pauciflorus*, *crispus*, *pectinatus*—*Potentilla Norvegica*, *anserina*—*Prunus*, several kinds—*Ptelea trifoliata*—*Pyrola elliptica*, *rotundifolia*, *secunda*—*Peranium repens*.

Quercus.

Ranunculus geoides?, *aquatilis*, *cymbalaria*—*Rosa Carolina*—*Rubus odoratus*—*Rudbeckia laciniata*—*Rumex verticillatus*, *acetosella*.

Sagittaria latifolia, *graminea*, *variabile*—*Salicornia herbacea*—*Samolus Valerandi*—*Satyrion repens*—*Peranium repens* — *Sanicula Marilandica* — *Scirpus palustris* — *Scolopendrium vulgare*—*Scutellaria galericulata*—*Scrophularia Marilandica*—*Seriocarpus asteroides* — *Shepherdia Canadensis*—*Silene Caroliniana*, *Pennsylvanicum*—*Silph-*

ium laciniatum—*Sisymbrium amphibium*?—*Sisyrinchium Bermudiana*—*Sium cicutæfolium*—*Solidago odora*—*Sonchus asper*—*Stachy spalustris*—*Sparganum ramosum*—*Steironema ciliatus*.

Taxus Canadensis—*Teucrium Canadense*—*Thalictrum dioicum*—*Thuja occidentalis*—*Trintalis Americana*—*Triglochin maritima*—*Triosteum angustifolium*, *perfoliatum*—*Trochynotia*.

Utricularia minor—*Urtica gracilis*.

Vaccinium Pennsylvanicum—*Verbascus Thapsus*, *Blattaria*—*Verbena urticifolia*, *hastata*—*Verbesina alternifolia*—*Veronica serpyllifolia*, *scutellata*—*Virburnum Opulus*—*Vicia Cracca*—*Viola rotundifolia*.

Xanthium spinosum—*Xanthoxylum Americanum*.

Zizania aquatica.

Mr. Pursh mentioned many other plants and trees, but the above are all I could verify as synonymous among all accessible writers of a hundred years later.

THE ONONDAGA FLORA

In 1912 Mrs. L. Leonora Goodrich published the "Flora of Onondaga County," the plants having been largely collected by members of the Botanical Club—all ladies—but in some measure by men who were interested in botany, and were better able to obtain some plants because of living near the spots where they were to be found. Thus Dr. Munson and Mr. Samuel Cowles of Otisco, gave valuable assistance to the great work. I added my mite when I had leisure, being the first to discover several rare plants in this county. Others might collect, but she reserved one task for herself for which she was well fitted. The plants were "compiled, classified and catalogued by" her; a great achievement in itself. She did not say how long she presided in the meetings, but Mrs. Rust was president when I made my first trip with the club, May 30, 1881. I was guide that day, and beside the special tree to be shown we had other notable finds.

The Botanical Club met at my house in Baldwinsville, May 5, 1900, to celebrate its twenty-first anniversary, which would show its formation in 1879, and Mrs. Goodrich as president for about forty years at the time of her death. There will be added to what I have said, and following this paper, a memorial read before and adopted by the Board of Directors of the Onondaga Historical Association, of which she became a member in 1894, and a few years later a director.

In writing about the flora of this county I shall follow the later and reasonable plan, of beginning with the lower forms and ending with the highest found here, but while going through these systematically, there will be wide omissions. In fact the ferns and their allies will have more attention than the later forms of plant life which immediately follow them. The curious and often beautiful fungi may secure a few words, but there will be fewer for the grasses, sedges and rushes which come later. Indeed in my selection I shall do just as I please, and enjoy my task in this simple way.

The Adder's Tongue heads the list, a somewhat ovate leaf representing the head, and a very long and slender upright spike, with clustered sporangia about the tip, not inaptly standing for the adder's tongue. "Overlooked rather than rare" applies well to this. One day I found a few in a wet, sedgy piece of ground. Some Syracuse ladies wished to collect these themselves, and I prepared for the occasion by staking all I could find. They were pitifully few. The ladies were late and might be further delayed, so my daughter and I started, leaving word where we would be found. We had just commenced work, not far from the rural road, when our guests drove up and we went to the field, not far away. They returned home jubilant. The next afternoon we resumed the adjourned search, with small hopes, and lo! we had three times as many specimens as the day before. That was not all. For a long time we kept finding them in unexpected places. I first collected this in 1878.

The Grape Ferns are the next allies of the true ferns, and of these the Moonwort is rare, though I have found it near White Lake. The Ternate Grape Fern is my favorite in this genus, even more than its varieties. It is often quite

large and has an erect, sturdy bearing that is quite refreshing. It is found throughout the county, on level ground and steep hillsides.

The Matricary Grape Fern, a fine species, I found in June, 1884, near Baldwinsville and in woods at Belle Isle, where it was abundant, as it probably is in other places in northern parts of the county.

The Lance Leaved Grape Fern I found at Tully village, June 19, 1881, but not at Baldwinsville. I doubt its occurrence here north of Syracuse. Another very small fern of this genus comes from a bog in Lysander, where I have found many very rare plants. I called it *Botrychium simplex*, for want of another name. I found abundant specimens there June 16, 1884, growing in the water. When I took Prof. L. M. Underwood to see it we found a large bed in sphagnum, but of rather larger size. He thought it a new species, after careful study, and was about to publish it when Prof. A. A. Eaton anticipated this by two weeks, naming it *B. tenebrosum*. It is now commonly considered a mere variety, with some special features, yet two eminent authorities made it a species.

The large Rattlesnake Fern is the best known of these ferns, being conspicuous and widely distributed.

We have but three species and a variety of the *Osmundas*; all handsome and two suitable for cultivation. The Royal *Osmunda* is large and with many branches, but requires a very wet soil. The well known Cinnamon Fern is one of the finest of this genus, interesting in every stage, and conspicuous by its tall bright colored spikes. In the variety these have more or less sterile pinnæ scattered along the spike. The Interrupted Fern is a better name for the remaining species than another sometimes used, having its fine sterile fronds interrupted by smaller, central and fertile pinnæ.

The common Sensitive Fern I mention only for its name, it being sensitive to frost, but the Ostrich Fern rivals the Cinnamon as a fine ornamental plant. Its name comes from the dark fertile fronds, clustered at the base and suggestive of ostrich plumes.

I had the great pleasure of discovering *Woodsia ilvensis*,

July 15, 1885, on the high cliffs on the east side of Labrador Pond, well within the county line. Such a climb! but then, such a sight! The beautiful small tufted ferns fringed the grey rocks for quite a distance. I was well repaid and others followed my example, for it is everywhere a rare fern.

I am compelled to pass over our more common ferns, three only of which are evergreen. There are forty-eight species listed in this county. The Christmas Fern is well known and quite variable. One of the Chain Ferns grows at Beaver lake, and in small bogs not far away. The Walking Fern occurs in many places south of the old canal. It walks by forming roots at the long slender tip. The Ebony Spleenwort occurs at Rockwell Springs and in Spafford, near Skaneateles Lake. The very rare Wall Rue Spleenwort I found on cliffs east of the railroad tracks and the Jamesville road, August 6, 1884. Station now destroyed by quarrying. In 1911 Mrs. Goodrich said, "Very rare. In one locality to date."

The Slender Cliff Brake I found on rocks on both sides of Skaneateles Lake, July 20, 1882, and July 27, 1885. I have failed to find it in the last three years, but have a new station on the east side this year. It occurs also at Green and White lakes. The Purple Stemmed Cliff Brake occurs at the same places and at Onondaga Valley, where I found it July 6, 1881. At Green Lake I also found it, August 3, 1881. The Common Polypody is quite rare in the northern part of this county, but occurs in several places on Skaneateles Lake and in Spafford. I found it also at Rockwell Springs, October 8, 1880, but it may not occur there now.

In the next family but one Mrs. Goodrich catalogues *Salvinia natans*, (*Marsilea* of Pursh) which she had never seen at that time. Underwood said of this: "Reported by Pursh in 1814, from central New York, but his exact station is unknown." I found it in a pond in Thornden, Syracuse, July 4, 1913, and again September 6, 1915, and Mrs. Goodrich had at last the pleasure of seeing this curious and rare plant. It has been introduced from Europe in several places, but this is the only station known here.

The beautiful Club Mosses, including Ground Pine and Trailing Christmas Greens, are classed mostly as rare by

Mrs. G., with two not common. I found some of these fine and abundant on the west shore of Skaneateles Lake, and very plentiful in Spafford on the east shore. Near Baldwinsville nearly every species is represented somewhat sparingly.

The White Pine worthily represents its genus in the northern towns of the county, where it grew in large numbers and of a great size. "The Tall Pine of Lysander," James L. Voorhees, Sr., cleared away large groves of this and others did the same on a smaller scale, burning trunks and branches in vast heaps, whose embers still blacken the soil. The choicer trunks went to the sawmill, and many a root helped form a lasting fence. We had good shingles, too, while the pine trees lasted. Mr. George Geddes told of the size of some of these great trees. One in Camillus was 230 feet high, and other furnished 154 feet of saw-logs.

In an early earthwork in Elbridge, the ground was strewn with limbs of the Pitch Pine, and one remained in the town for some years after the first settlement. It has not been reported elsewhere in the county.

The Tamarack, or American Larch, is our only conifer which is not an evergreen. Both the White and Black Spruce occur at Beaver Lake, Lysander. A wise botanist does not carelessly pass the latter by. The Hemlock is another familiar evergreen, once abundant and of large size. It follows water courses quite frequently. The Balsam Fir is another fine and rather slender tree with a smooth bark. The Flora of Onondaga County credits this to North Cicero Swamp, June, 1902. Mrs. Goodrich told me that it was seen there by Mrs. Rust, first president of the Botanical Club, and did not claim to have seen it herself. I have some doubts whether anyone else has. I am quite familiar with all parts of Cicero, am a keen observer and have known the tree since early childhood. Recently I inquired of an intelligent citizen of that town, as to the probability of its occurrence there. He had never seen it there, nor even heard of it. In Skaneateles village, long ago, there were two of these trees which I was told came from Fabius. In 1911 I was in the latter village, and across a field on the north side of the road, leading west, I saw some tall trees in a piece of woodland which suggested Balsam Firs. It took me but a few minutes to verify this. I certify that it grows in Fabius.

Large White Cedar swamps are quite frequent here, but the larger trees have vanished. The branches are much used for Christmas decoration, and its common name of Arbor Vitæ suits well with this use.

Both the Juniper and Red Cedar are well distributed, and the latter is quite abundant in Spafford, near Skaneateles Lake. There is a rare species of this, which is found in the Pine Woods near Baldwinsville, which lies nearly flat on the ground. Of a similar habit is the American Yew or Ground Hemlock, which produces a roseate cup-shape drupe, in which stands erect the purplish stone.

In the pondweed family twenty-nine species are in the Onondaga Flora, and in the Grass family 112 species. The Sedge family goes still higher with 169 species, and the Mosses are 171. Mrs. Goodrich also gave a list of over 200 species and varieties of Fungi, but added that these "form only a portion of those found here." Her list includes safety notes, for some are poisonous, notes on what parts are to be eaten, on flavor and how to cook them, not the least important considerations. In her zeal for knowledge she often cautiously tested some doubtful kinds, being sometimes slightly inconvenienced thereby. One cannot thread our woods or fields, with an observant eye, without wishing to know more of the strange—often beautiful—plants, which were unseen in the evening, but appear in full glory in the morning. Some have a more gradual development, with varied uses.

In the Arum family Jack in the Pulpit is conspicuous and often large. He stands in his circular box-like pulpit, with the sounding-board curving over his head, but, like the Indian Cradle, the significance is not so familiar as in earlier days. The Wild Calla, a dwarf representative of the stately Calla Lily, I have found at Baldwinsville and in Cicero Swamp. It is hardly rare in our northern towns, where the fragrant Skunk Cabbage abounds in swamps. The Golden Club is rare, and is credited to Mr. Cowles of Otisco, who writes me he has not found it. The root of the Sweet Flag is prized by many. Though it is most frequent in swamps I have found it in marshy banks of the Seneca River.

Passing over other plants, I saw the rare Blazing Star for

the first time in 1921, on the Onondaga Reservation. A handsome flower, but hardly a blazing one.

The Red or Wild Orange Lily is placed by Mrs. G. on dry or sandy ridges and described as frequent. I have never seen it north of Syracuse or outside of woodlands, and thus prefer the name of Wood Lily, used by some. It has a single terminal flower, pointing upward, and was described by Pursh, though not here. I have had specimens with from two to five blossoms. On the other hand the next two species have several nodding flowers, with recurved petals. The first of these, which Mrs. Goodrich calls the Gold Yellow Lily, usually has some orange or red, while the Turk's Cap has still more orange or red, and, from its situation, I prefer the name of Meadow Lily. It is very handsome and improves under cultivation. Both of these interested Pursh. The Day Lily, escaped from cultivation, sometimes occurs in large masses on wet roadsides.

The Yellow Adder's Tongue is common in many woods in early spring, but often lacks flowers from its crowded condition. The white species has been found here but once. Several escaped plants I pass over.

The Yellow Clintonia is abundant in the north part of the county, but its handsome flowers are somewhat rare. I found some, however, June 1, 1923.

The Large-flowered Wake Robin, now more commonly known as the White Trillium, vary much in size. The flowers soon acquire a pinkish hue, which leads some to think they have found a new species. It also is sometimes four-parted throughout, and rarely is quite double. One such was brought me from a spot near Baldwinsville, May 21, 1885, and for several successive years. It had six sepals and nineteen petals when I first described it.

I do not understand her varieties of this species, of which she had twenty-three kinds, mostly from one spot. My varieties were of the purple species, and she had occasionally pale yellow flowers of this. The beautiful Painted Trillium, which she called uncommon, is quite frequent in Lysander and Van Buren. *T. cernuum* is not mentioned by her and is rare here, but I found a specimen at Baldwinsville, May 19, 1885, and, as I remember, one or two others soon after.

The Carrion Flower I found on a fence near the Seneca River. Not liking the odor I carried none home. The Blue-eyed Grass is common and pretty.

The Moccasin Flower or Stemless Ladies' Slipper, is found in almost every part of the country, on highlands and lowlands, in wet places and dry. The beautiful white variety grows only in sphagnum, and is or was found at Beaver Lake in Lysander in great abundance. I first found it there June 8, 1883, and many times afterwards. As I sent specimens to the Botanical Club at that time, and as Mrs. G. was with me there at a later day when we collected this, I do not understand why she omitted this important station. Her full note on the species is this: "Infrequent. Woods and swamps. Variable. Cicero Swamp, June, 1880. A white variety was found in same locality by L. L. Goodrich, June, 1895. Only one plant." As I had botanical tastes in my boyhood, eighty years ago, in explaining a swamp near Skaneateles village I found one specimen of this species in its rich purple hue, and, far to the south, I have recently found it on both sides of the lake. The yellow moccasin flowers are widely distributed, as is the beautiful Showy Orchis. As I write this some of both are before me.

The Large Round-leaved Orchis is Pursh's *O. bifolia*. I once found it in bloom, in my sailing days, on the west shore of Skaneateles Lake growing in a grassy spot near the shore and quite conspicuous. Though I have often searched for it since I could not find it till last summer, when I met with it farther south on the east shore, beside a large group of *C. acaule*, 500 feet above the lake. It had no flowers but I hope for better luck this year. Hooker's Orchis I found in the Pine Woods, Lysander, May 30, 1881, and afterward at other places far apart. I have just collected it again at Round Lake, near Fayetteville. The beautiful and rare Yellow Fringed Orchis I found at Beaver Lake, July 4, 1887, and, at the same place, August 14, 1884, and later, a large patch of the White Fringed Orchis, a stately and beautiful plant. At the same place the rarer Ragged Orchis. This I also found in Cicero Swamp, May 12, 1896. It is more curious than beautiful. The Purple Fringed Orchis, which I admired in my boyhood, is found throughout the county.

The Rose Pogonia, which Mrs. Goodrich says was found

sparingly at Beaver Lake, near Baldwinsville, I found in abundance there June 27, 1884. The same year I found there the Nodding Pogonia, rarer and inconspicuous. A better place for it is on the west side of Onondaga Valley. The Whorled Pogonia, a curious and somewhat rare plant, I found at Beaver Lake, May 31, 1884, and often afterward, it being more abundant there than elsewhere. It should be understood that in speaking of Beaver Lake I usually mean the large sphagnous shaking bog, once a part of the lake. The pretty Arethusa was found there June 12, 1897, the only one I know of from that prolific spot.

The finding of the Helbeborine here in August, 1879, gave our Botanical Club a wide reputation. I, myself, have seen it growing on both sides of Skaneateles Lake.

I pass over a number of orchids, mostly rare but not all, to speak of but two more. The Southern Twayblade (*Listera australis*) Mrs. G. says is occasional and is found in bogs and ditches. Also that one was found with three leaves by a member of the S. B. C. in 1895. No other place was mentioned. I found it at Beaver Lake, June 4, 1884, this being the first ever found in this county. I, at once, sent specimens to the State Botanist, who informed me that an Oswego botanist, in a home excursion, was a year ahead of me. After that I guided many botanists to the small station where it grew, among the rest Mrs. Goodrich, where they had the pleasure of collecting for themselves this very rare orchid. This small orchid is not beautiful, and looks much like a slender twig with mosquitoes clinging to it. the lovely Calopogon or Grass Pink I found abundant at Beaver Lake, as it had been elsewhere.

Many of our common trees I pass over. The Cork Bark Elm, which Mrs. G. thought might have been introduced, attains quite a height, and is too widespread to allow of this supposition. I remember in my boyhood, fair sized trees growing wild, which must have antedated pioneer life here by many years. The Slippery Elm, the schoolboy's delight, and once used by the New York Iroquois for some of their bark canoes, is less abundant than it once was. The Hackberry may once have been well known, but this is not its reputation now. Mrs. G. mentions two—there may be more, but this is uncertain. At least they are rare enough

to justify the frequent name of Unknown Tree. One of these is on Crooked Brook, south line of Baldwinsville, and my record of it, made at the time, says that it blossomed April 25, 1896, was 60 feet high, and measured 9 feet 9 inches around. The nearest of its kind is twenty miles away.

The Strawberry Blite I found near Labrador Pond in 1885. Pursh reported it in 1807, and Mrs. Goodrich had the unusual experience of finding fine specimens in her home garden.

In Syracuse perhaps many know little of its most characteristic plant—the Slender Glasswort, better known to earlier people as Samphire. It was the natural accompaniment of the salt industry here and seems likely to disappear with it. In autumn its bright red myriads of plants arrested every eye, but its usefulness same earlier for pickles, which I never tasted, though the plant was sold on the streets.

The Pokeweed, Mrs. Goodrich said, is “very handsome under cultivation,” nor will one pass it by unnoticed in its wilder state. It was a favorite dye with the Indians, and I have known it used by white people.

The Deptford and Maiden Pinks were my finds: the first near Baldwinsville, June 15, 1885, brightly smiling through the roadside grass. The other I found in the Baldwinsville Cemetery, June 19, 1897. I am inclined to think Mrs. Goodrich’s words refer to this and should have the same date. I mentioned my finds and said I took them that day to the Academy of Science, of which she was a faithful member. Her words imply that the flowers were brought to her. She said: “Only ones I have seen were from Baldwinsville, June, 1898.” I alone knew where to look for these plants and at that date was far away.

I was guide for part of the Botanical Club to see the Cucumber Tree (*Magnolia acuminata*) in blossom by the roadside, May 30, 1881. It was rather late, but they had never seen it before. Others were in the adjoining woods and some have been planted later, in the south side streets of Baldwinsville. In my younger days there was a fine grove of these trees on the Mile Point, Skaneateles Lake, but all have long since disappeared. The Tulip Tree has some-

times been called by this name, and the Botanical Club wanted to be sure that I knew the wild *Magnolia*.

The Wild Columbine is one of the most beautiful of our wild flowers. May 31, 1893, I went on an excursion up the Seneca River with our botanical class, and going across an open but bushy field, on our way to Beaver Lake bog, we gathered pure yellow Columbines in quantities. I sent some to Cornell University, and was asked to send plants the following year for experimental use. Not a yellow one could I find, though I carefully explored the field for many years.

In several places the White Water Crowfoot occupies large areas in Seneca River, while the yellow species, though less abundant, lights up this river in many places. The Seaside Crowfoot, in spite of its name, finds an appropriate home about Onondaga Lake, often called the Salt Lake in early days. I neglected to speak of the abundant Water Lilies in Seneca River and Beaver Lake. The Yellow Water Lily prefers small ponds or any stagnant water.

The Mandrake or May Apple charmed me with its creamy white flowers in my youthful days. It was an abundant plant in the fields about my village home, and my boyish fancy was that it was a vegetable umbrella, raised by fairy hands. Some people like the ripe fruit even now, and two weary Moravian missionaries, in 1750, climbing a steep mountain path on their way to Onondaga, found welcome refreshment in this.

The Sassafras Tree may yet be found as a shrub throughout the county, but not as a tree. A grove of large trees, sixty feet high, was cut down in Van Buren, as late as 1880, and a small tree stands before a stately home in Baldwinsville. To this family belongs the Spice Bush, growing in bogs, and once the delight of schoolboys. The Bloodroot is one of our beautiful spring flowers, and well worth a place in our gardens, where it is sometimes found. It grows in the open quite as often as in woods.

I pass over the many cruciferous plants, hurtful or helpful, and come to the Pitcher Plant, an insectivorous plant, frequent in the sphagnum swamps of the north part of the county, and perhaps elsewhere. A little water may rain in,

but it seems mostly a secretion. In the Botanic Gardens at Washington, I found the hollow, unopened leaves of some species contained water. Insects entrapped are drowned, being prevented from escaping by stiff reflexed hairs inside. The purple flower is large and conspicuous, but the Onondaga Indians have lost all knowledge of the plant.

The three Sundews of this county are also all found at Beaver Lake, where I first found the round species June 13, 1882. These are also insectivorous, the glandular hairs on the basal leaves secreting a juice which entraps the insect, but does not drown it. It has its common name from the sparkling red and dew-like globules encircling the leaf.

Our three Saxifrages are common, but each has its special range.

The Mitreworts are also common May flowers, and it was of these that Longfellow wrote "at Pentecost, when bishop's caps have golden rings," with his other delightful spring thoughts and words.

To Mrs. Goodrich's stations for the Grass of Parnassus I add one on the Jamesville road, in a swamp between the quarries, where I found it August 6, 1884. It hardly suggests a grass of any kind, with its large white flowers and cordate leaves.

The common Witch Hazel needs no description, its peculiarity being an extremely late flowering, suggesting something uncanny. *Dalibarda repens* I have often found at Beaver Lake, and Pursh observed it here in 1807. The Flora of Onondaga County assigns it to openings and roadsides, one station for 1895 being on the Jamesville road.

The Mountain Ash is quite frequent in Spafford. Mrs. Goodrich credits it to the Indian Reservation in 1909, and I have found it in Lysander. It is not a large tree, but its fine foliage and flowers, and its broad clusters of bright red berries, make it both a handsome and conspicuous tree. In Spafford it is quite a favorite.

The Sweet-scented Crab Apple Tree is classed by Mrs. G. as infrequent, very fragrant and beautiful—a good description. I have gathered the flowers on the Indian Reservation, where there is quite a group of these trees. On some

Seneca reservations I have seen it growing by houses, either for ornament or use. The Shad Bush is conspicuous in its May bloom. I pass over other fruits.

Among the Legumes Mrs. Goodrich classes the Wild American Senna as rare here but found it at Marcellus Falls in June, 1895. It is quite abundant by the creek near South Onondaga. The Clovers of all kinds are found everywhere.

The Common Locust was a favorite shade tree in my boyhood, but has lost both interest and usefulness. Besides, if you want to be rid of it, it declines to be easily exterminated, and a hard fight is before you.

Pursh saw the Kentucky Coffee Tree near Onondaga Lake in 1807, and Dr. Munson told me of a very large and beautiful one in Otisco, about twenty years ago. Mrs. G. found the large and handsome Wild Lupine "abundant in one dry, sandy district at Centerville," (North Syracuse) June, 1896. I also found it abundant near the Euclid cemetery, in a sandy field, mingled with our Wild Columbine, May 16, 1896. With both in full bloom the effect was very fine.

The Ground Nut was mentioned by Pursh in 1807. Mrs. G. mentioned it at Liverpool, August, 1890. It is a climbing plant with edible tubers. I found it at the old Float Bridge, below Baldwinsville, on the Seneca River. In floral catalogues it is now classed as a highly desirable vine.

The Herb Robert is a beautiful little plant, never obtrusive, but always lovely. The Flora of Onondaga County has this note: "A white variety has been found at Ind. Reservation by a member of Syracuse Botanical Club." I was the member and my date was August 21, 1884. Alas for the variety. I have not found it since.

The Prickly Ash is abundant in one spot on the Indian Reservation, and also occurs in Baldwinsville. Pursh mentioned it when here. Mrs. G. found it in DeWitt.

The Purple Milkwort was found by her in Midland Avenue and Kirk Park, Syracuse. I found it in abundance one and one-half miles north of Baldwinsville over thirty years ago. The Snake Root is found in both swamps and rocky soil. Mrs. G. dates her specimens in 1910, from Kinney's woods, but probably had collected it long before. In the

same way I give a date of May 17, 1897, Indian Reservation, for the Seneca Snake Root, though I had known it for years. The beautiful Fringed Milkwort was still plentiful on the edge of Tamarack Swamp when I came to Syracuse in 1900, and held its own at Beaver Lake, where I found it in abundance when I first identified it, May 17, 1897.

The Three-seeded Mercury is not a common plant and is rather curious than attractive, being one of those where the large bracts are more conspicuous than the small included flowers. My specimens were from Baldwinsville, October 12, 1896.

The Poison Sumac or Poison Elder differs much in flowers and fruit from the other Sumacs, and is very poisonous. The Poison Ivy belongs to the same genus, and is often called the Three-leaved Ivy, being a somewhat conspicuous climber. It is very poisonous to some—not at all to others. I avoid it but have not suffered from it. I have seen horses eat it from fence posts where farmers had allowed it to grow by the roadside. On a point on Skaneateles Lake recently I saw mothers sitting unconcernedly in the midst of a large patch of it, while their children had a good time among the pretty leaves. No one was harmed but it looks like a risk. Don't try it.

The American Bladdernut I greatly enjoyed, as a boy, when in fruit, and older people often find it a great curiosity when they see it for the first time. The three-pointed inflated capsule became the bladder, and when the seeds became loose I had a ready-made rattlebox, with no need of knife or material. Besides, the cost was nothing to the penniless boy.

We all know the Sugar Maple and its delicious product, so typically American. How we pity the Old World people who never tasted it. Each species has a decided character of its own—sometimes purely local. Thus the Striped Maple or Moosewood is handsomer on Skaneateles Lake than I have seen it elsewhere, varying even then. The Ash-leaved Maple I have seen only in Clay and Cicero.

Passing over these and others, the Virginia Creeper at once recalls its wondrous autumn tints, and the Basswood or American Linden suggests the most delicious of all

honey. Nay, more, that last name recalls the days when we declaimed "On Linden when the sun was low," with the stirring lines that followed.

The white and roseate Mallows along the roadsides in Spafford seem to me specially fine, but I fear we have lost another in the Swamp Rose Mallow, of great size and fine color, once frequent around Onondaga Lake and in Seneca River. When I left Baldwinsville a fine plant glorified my garden, but my successor did not care for flowers.

St. John's Wort is known to all in more or less of its eleven local species.

The Rock Rose or Frost Weed, which I found on the Onondaga Reservation in 1890, was hailed by Mrs. Goodrich as a new discovery a few years ago, and thus is not included in her list of 1912. As I used to report any thing new or remarkable at the time when found, I am inclined to think she forgot to record this, being cumbered with many cares. The plant is remarkable in its flowers. First comes a broad bright yellow flower which is terminal, but soon overtopped by axillary branches, bearing small clustered flowers having no petals. In late autumn crystals of ice sometimes shoot from the base, whence its popular name. These I did not see.

I pass over the list of eighteen species of Violets. Pursh said they had at least a dozen kinds in all Pennsylvania. Many other plants I pass by till I reach the Hercules Club, which Dr. Munson said was rather frequent in one spot in Otisco. It has a maximum height of twenty feet but is usually much smaller. There follow this the American Spikenard and two species of Sarsaparilla, followed by Ginseng, long an article of commerce, and recently sparingly cultivated for this purpose, apparently with small profit.

In the Poison Hemlock it is to be noted that Britton, while using this name in describing the plant, says nothing further about poison, while Mrs. Goodrich says, emphatically, that it is "a virulent poisonous herb." Again in the Water Hemlock, (*Cicuta maculata*) which Pursh described from Ephraim Webster as a quick and deadly poison, she says nothing of poison, while Britton adds that word as well as the name of Beaver Poison. Again in the next species of

this genus, the Bulb-bearing Water Hemlock, he mentions no bad quality; she adds the word "Poisonous." We occasionally hear of people—children especially—who are poisoned by eating the root which Pursh described in 1807. It is still found on the Indian Reservation.

The *Hydrocotyle umbellata* or Many-flowered Marsh Pennywort was first observed on the Oswego River by Pursh, and was not reported again till I saw it on the Seneca River, above Baldwinsville, May 30, 1881, but not in flower. I was more fortunate August 5, 1885, finding it in bloom at that date. Whatever it may do elsewhere, it is found only in flowing water here—specifically the Oswego and Seneca, and probably the Oneida River, as I have found it in abundance a little above Three Rivers Point. Mrs. Goodrich's statement is this: "Rare. Swamps. Have only seen few specimens, furnished by L. Underwood, from Indian Reservation. Also Hoyt Farm, July, 1895." Prof. Underwood had his specimens from me, and had some to spare.

I think the above is curiously mixed up with the following on the American Marsh Pennywort, (*H. Americana*) "Rare. Swamp. Have found *H. A.* in one locality only, viz: Dr. Hoyt's farm, east from Green Point. Reported by S. Cowles, Otisco. Found on Indian Reservation, August, 1895." I take it that Mr. Cowles found it there. There was an earlier first finding, August 12, 1881. My daughter, Virginia, accepted an invitation from Mrs. Rust, then president of the club, to make an excursion over Onondaga Hill, through the Reservation and back as we chose. Quite a party went along. We lunched in the lowland, near the creek, and while the lunch was preparing and the coffee boiling, some went into a marshy place to see what could be found. In a few minutes my daughter's find was the above plant, which she bore to Mrs. Rust. The latter exclaimed. She had searched everywhere, metaphorically, and here, before her eyes, another had found it after a few minutes search. That was how one of this genus was first found on the Reservation. It is presumed the two accounts became confused. To sum up, August 3, 1891, Profs. W. D. Dudley and W. W. Rowlee of Cornell University visited me in quest of rare plants, of which we got many, and we three are the only ones who ever collected *H. umbellata* in this county.

The Flowering Dogwood is quite common here, and indeed occurs within the city limits and on the Indian Reservation. My first date for it was at Pine Hill, Van Buren, May 13, 1881. I had but just begun to record dates. Of course we all know that the seeming flowers are large white bracts, surrounding a small cluster of the true ones. A quaint and familiar small species of this genus is the Dwarf Cornel or Bunch Berry, from three to nine inches high, while the preceding species may attain forty feet. Of the six other species here, Pursh observed three.

The Pepperidge or Sour Gum, a large tree, I have seen in Ohio but not here, where it was once abundant. Mrs. Goodrich had not seen it, but Mr. S. Cowles, of Otisco, had found it there. It is often called the Tupelo.

The Wintergreen family I pass over, the nine species of the family being fairly familiar, though Mrs. G. classed three as occasional and three more as rare. The Wintergreen we know best is the only one styled frequent.

The Indian Pipe, though perfectly white in every part when first in flower, becomes black at full maturity—intensely black when pressed. The nodding flower also becomes erect. Mrs. G. found pink specimens near Lake Oswegatchie. Large numbers of those I found near Skaneateles Lake were tinted in the same way. In a favorable season and place they may be seen on every side. An allied genus has the same general features, but the nodding flowers are from three to fifteen, and from white to yellowish and pink. Mrs. G. called it very rare and I would do the same, having found it in but one place as yet on Skaneateles Lake. The usual name is False Beech-drops, and sometimes Bird's Nest, which certainly sounds better.

The Heath family leads off with Labrador Tea, an evergreen shrub, with terminal clusters of white flowers. Mrs. G. had hers from LaFayette Woods and Tamarack Swamp. I collected mine at Beaver Lake and Cicero Swamp.

The Azalea or Wild Honeysuckle, the Pinxster Flower of the Dutch pioneers, I found, to my great delight, in my school days and straightway transplanted it. It is a lovely flower and found throughout the county, in wet places as well as dry. Two other species are listed for this county,

the Swamp Pink or Honeysuckle, found by Mrs. Goodrich in two places and classed as rare, and the Smooth Azalea, found in Otisco by S. Cowles, described as occasional in high, swampy woodlands. Britton places this in Southern Pennsylvania and North Carolina, quite a distance from Otisco.

The rare Swamp Laurel is found here only in Cicero Swamp, where my date is May 16, 1896, and Mrs. Goodrich's in July, 1889. It is much like the Mountain Laurel, but is every way smaller. The Mountain Laurel I long ago saw in the Watkins Glen, and it has a wide range in the eastern and southern parts of the State.

The Andromeda, or Wild Rosemary, Mrs. G. thought rare here, yet found it in Cicero and Tamarack swamps. I found it at the former and it was quite abundant at Beaver Lake, April 21, 1884. She collected it in June, 1899, which was about the end of its flowering season. The Leather Leaf is easier to find, and occurs at the last mentioned places and others.

The Trailing Arbutus likes both sandy and rocky ground, or a mixture of both. My first knowledge of it was at the Pine Woods, west of Baldwinsville, where it had long been gathered by the roadside. This was in April 1882, and I soon found that other patches were not far away. Mrs. Goodrich found it at North Syracuse, and some quite large areas may be seen on both sides of Skaneateles Lake, where there is little sand. It is also called the Mayflower and is thus linked with the Pilgrims and their ship. Its great popularity has become its greatest peril.

Of the Spring or Creeping Wintergreen, called Checkerberry by some, Mrs. Goodrich says "Plentiful everywhere," which must be understood in a broad sense,—that of a wide distribution. In many a fit place it will be sought in vain, but then, if it is found, you will be pleased with its spicy flavor.

Huckleberries of several kinds are found. The list calls for ten, of which several are seen in our markets. They like places high and low, wet and dry.

The large and small Cranberries both occur here but in very small numbers.

Several kinds of Loosestrife are frequent and conspicuous, and then comes the pretty Star Flower, for which Pursh seems to have had a special liking and to which he gave its scientific name after much study. Beaver Lake, etc. Though somewhat rare here I found the Scarlet Pimpernel in blossom in July, in Baldwinsville. Another name for this pretty little plant is the Poor Man's Weather Glass, the flowers closing at the approach of rain.

Four kinds of Ash trees occur here of varying importance and all well known. The early common term of a Black Ash swamp, sufficiently shows where one would be found.

The Small Centaury or Bloodwort I found near Lamson's in abundance, August 14, 1885, and in 1888 on the old fair grounds, south of Baldwinsville and on the west bank of Seneca River. A pretty but not conspicuous plant. Somewhat rare.

The Yellow *Bartonia* was omitted—accidentally, I think, as I had found it at Beaver Lake. It was called after Prof. Benjamin S. Barton of Philadelphia, who paid Pursh's expenses at Onondaga and elsewhere. It is a small plant and in no way conspicuous, though from four to fifteen inches high and very slender.

While Mrs. Goodrich listed six *Gentians* she placed but four of them in this county. Of these she considered the beautiful *Fringed Gentian* as occasional, and the *Closed Gentian* as infrequent, which it is not along the Seneca River. They bloom late in the autumn.

The Buck Bean, which I first noted as being abundant in the Beaver Lake bog, May 21, 1884, Mrs. G. found in Cicero Swamp, June, 1900. In many ways it is an interesting plant, and is probably confined to these two places.

The Butterfly Weed or *Pleurisy Plant* is the most conspicuous of our Milkweeds, while the common species is, of course, best known. The former, abundant on the Indian Reservation, reaches the north line of the county.

The Black Swallow-wort was found by Mrs. H. N. White, in Syracuse in 1897, and was brought to me from a street in Baldwinsville, in 1900. The specimen was in flower and plucked from the vine, which measures from two to five feet in length. When mature the pods suggest the Milkweed.

The Morning Glory family is well known, though the morning has little to do with some kinds. The four species of Dodder I have probably seen without looking up their specific names. They belong to a large genus of parasites, and the plants and flowers here vary from yellowish white to orange. It is a curious sight to see them in full vigor, yet apparently rootless. I have seen them mostly along the Seneca River.

The Wild Blue Phlox varies from bluish, through lilac to white. I have found it in Skanéateles and on the Indian Reservation. The Moss Pink sometimes occurs in cemeteries.

The Hound's Tongue was better known as the Tory Burr in my early school days. The Revolution left its memories, and Tories had been more troublesome than regular troops, and here was a plant that annoyed them in its turn. The other common name, suggested by the leaf, is but a simple translation of its Latin name, a dog's or hound's tongue.

The Comfrey or Healing Herb also carries me back to early days. My mother used to get the roots, saturate them with sugar, dry and keep them for emergencies. When I got a bad cough or cold I took my medicine as a boy should, without a wry face. Was it efficacious? I celebrated my ninety-third birthday some months ago.

Whatever else I have out one blue flower will remain—the Viper's Bugloss—but why so called I cannot say. It is a stately plant, its bright blue flowers varying to violet purple. It came from Europe, and Europe is a troubled place. It is a weed and weeds are troublesome as a rule. I first saw it in large patches on the Reservation many years ago; now it has invaded the waste places of Syracuse, where it will easily be disposed of, and where, for its beauty, it may some day attain dignity as a garden flower.

There is another little plant here, mentioned only for its rarity, the Bugle Weed. It belongs to the large family of Mints, common and uncommon, useful and the reverse, which I pass over now with one exception, the *Colinsonia* or Stone Root, which the Indians dig and sell.

In the Potato family comes the Low Hairy Ground Cherry, somewhat rare here, but found at South Onondaga and Baldwinsville, where I have seen it but once.

The Jamestown Weed—Jimson Weed in pioneer days, and then common on roadsides and village streets—is now rare here. It has a wide range. One species is a favorite garden plant.

The Wild Tobacco is that cultivated by the Huron-Iroquois for centuries and once giving a popular name to a Huron tribe. It is smaller than our tobacco, has greenish yellow flowers, and as a rule, is found only on the Reservation, where it is used in various Indian rites. Mr. E. R. Smith grew some in his garden at Skaneateles, for awhile as a curiosity, and I did the same at Baldwinsville, one summer, to get small enough specimens for the Botanical Club's herbarium. It is an acceptable offering to Hawaneko, and to the Thunderers, Heno and his sons.

The Figwort family here includes the Mulleins—one species sometimes reaching an enormous height—Butter and Eggs—Maryland Figwort, Snake Heads, Pentstemon or Beard Tongue, Monkey Flower, Speedwells of many kinds, and Wild Foxgloves the same. Then comes the very rare and beautiful Scarlet Painted Cup, found in but one place here and collected only by me and members of my family, though others have seen it. I first found it May 17, 1897. The tufted and conspicuous bracts are brilliant orange to bright scarlet, and the plants are usually in groups.

Our two Louseworts are very common.

Of the four Bladderworts I have found but two kinds. At Beaver Lake Bog, where I first found it in abundance August 11, 1884, and many times since, the pretty fragrant yellow flowers, on the tall and stout scape, are a striking feature of the bog. The Wild Yellow Foxgloves are conspicuous on the Reservation, but rare elsewhere.

In the Broom Rape family, though somewhat rare, the Naked or One Flowered Broom Rape has been found in Otisco, Baldwinsville and Syracuse. It is also called the Cancer Root.

A very remarkable plant, the Squaw Root, (*Conopholis Americana*) which I found in Spafford in August, 1920, very near the east shore of Skaneateles Lake, I afterward found on the west side, quite high on the hill slopes. Mrs. Goodrich reported it in June, 1886, but had never seen it

until I brought her a manageable specimen. Since then my grandson, William B. Lodder, has found it in Hopper's Glen, Onondaga Valley. It is parasitic, and has a large tuncated base, difficult to describe.

Of our nineteen Plantains but one is classed as rare, and its only known station is now covered with Solvay refuse. Among others the Sea Plantain was found by the S. B. C. in 1900, and by me August 27, 1883, both on Onondaga Lake.

Bluets or Innocence is very rare here, but the S. B. C. reported a few specimens on the Phoenix road in the summer of 1895. That year I did no botanical work, but have an indistinct recollection of it near Brewerton at some other time.

The Button Bush or Globe Flower is interesting but not beautiful, and is abundant on the Seneca River. It is said to be frequent in swamps and on borders of streams, but I do not recall it there. It is a shrub three to twelve feet high, the white flowers in a dense globular form.

The beautiful Twin or Partridge Berry is found in "rich woods everywhere." Not to be disappointed please add "often at wide intervals." This delicate creeping vine is alike charming in flower and fruit.

In the eleven species of the Bedstraw family found here I have noted but two, Torrey's Wild Liquorice, found by me at Baldwinsville, June, 1890, and the Rough Bedstraw, at Dead Creek, two miles west of that place, July 12, 1880. In the others I felt no interest.

The American or Sweet Elder has now its berries brought into markets as food. The Red or Poison Elder, is also common, with red berries, but the latter name is doubtless an error and apparently local. Our eight Viburnums I pass over, as they are somewhat conspicuous under varying names.

The Feverwort or Horse Gentian, listed as occasional in Otisco and Fabius, June, 1898, I found on the Indian Reservation, May, 1913 and 1921.

The Twin Flower or Ground Vine, listed as frequent on cold mossy ground, has been reported only at the Pine

Woods near Beaver Lake. I found it there May 30, 1881, and Mrs. Goodrich, July, 1907. The general flowering season is June-August.

The Snowberry was reported at Green Lake, Jamesville, June, 1907. I found it on rocks, Skaneateles Lake, in my early days, but have not seen it of late.

The Wolfberry, credited by Mrs. G. to Peppermill Gorge, ranges from Michigan and Minnesota westward to British Columbia, Kansas and Colorado. The Indian Currant, listed by her in Monroe woods, Camillus, is assigned to New Jersey and Pennsylvania, and west to Western New York and Dakota.

Perfoliate Honeysuckle. Rare. Jamesville, June, 1899. I found it on west shore, Skaneateles Lake, 1920, and on the east shore in Spafford, 1922. The Hairy Honeysuckle I found in picturesque Whiskey Hollow, Van Buren, June 1, 1896, and Mrs. G. in Orville Woods, July, 1899. The Glan-cous Honeysuckle I found in the Pine Woods, May 12, 1896, and also on Skaneateles Lake, 1921. It was found also on Jamesville Road, in June, 1899. I pass over some others. Bush Honeysuckle, of another genus, I found in the Pine Woods, and the S. B. C. on the Jamesville Road, June, 1898.

The Valerian and Teasel families I omit. The Wild Balsam Apple and the Star Cucumber, climbing vines of the Gourd family, are found on banks of streams and are occasionally cultivated.

The Hare-bell, sometimes called Blue Bells, is frequent on lime rocks and in meadows. The European Bellflower, escaped, is often found on roadsides. The Marsh Bellflower occurs at Beaver Lake and in Skaneateles, and the rare Tall Bellflower in the vicinity of the Kirkville Green Lake. Venus' Looking Glass (*Specularia*) is of another genus of this family, is rare and has been found in Otisco. I collected it on the north bank of Seneca River, August 18, 1881. The genus *Lobelia* belongs to this family, though very unlike in appearance. The rich red Cardinal Flower was one of my early friends. The Great *Lobelia*, sometimes mis-called Blue Cardinal Flower, having a large spike of bright blue flowers, came later. The Wild Tobacco, the medicinal *Lobelia*, is common. Kalm's *Lobelia* I have found at Cross Lake,

but the Pale Spiked Lobelia has escaped me. Mrs. G. found it in the town of Clay.

I have found the Wild Chickory, with its bright blue flowers, in Syracuse, Spafford and elsewhere. I pass over genera of this family, excepting to note that the Dandelion sometimes unites several stems and flowers in one, and that the Devil's Paint Brush,—now a nuisance—is one of the most beautiful of our common weeds.

Now comes the Ragweed family, the second genus of which—the first in this county—bears the old classical name of Ambrosia, the food of the gods, the gift of which conferred immortality. Rather poor food that. I pass it by, and the following genus, to consider the Thistle family, a succession of surprises, for not a thistle appears till I come to the thirty-seventh genus mentioned in this county. Here and there I may mention a species. Thus we have the frequent Purple Boneset or Trumpet Weed, common in wet grounds. Common Thoroughwort or Boneset, good as a spring tonic. Of the Button Snakeroot I know nothing, but Mrs. G. has found our two species here. Of the Goldenrods she has listed twenty-one species, and around Skaneateles Lake, the nominally White Goldenrod (bicolor) includes nearly half the plants. Golden Rod was a terror to Mrs. G. Forty Asters and more are catalogued in this county, familiar Fleabanes and Everlastings, Elecampane, Yarrow of several kinds, Mayweed, Ox-eye Daisy, which appear like snowdrifts on some fields, the yellow Tansy, once famous for morning bitters, when temperance days were unknown. *Lysimachia punctata*, Spotted Loosestrife, has just been brought to me. I had not seen it before, nor is it in Mrs. Goodrich's list. Another, which she reports, I had never seen before. It is *Naumburgia thyrsiflora*, Tufted Loosestrife, a difficult plant to identify unless in best condition. It is rare here. Then comes the curious Colt's Foot, with flowers before leaves, the Groundsel, Burdock, and, last of all, the Canada Thistle, which was far down the Mohawk Valley in Pursh's day. A hard fight the farmers had for many a day, but while still troublesome it is under control. Some years since I found a white variety in Skaneateles. To go back a little in this family, in August, 1921, my daughter, Miss Virginia, found the Centaury or Black Knap-weed (*Centaurea nigra*) in great abundance between Spafford

village and the lake shore. Why it has the name of black I cannot tell, but the flower is rose-purple and much like a thistle in form. Mrs. G. received specimens but it was ten years too late for her book.

Another plant probably grew here in 1807, though found by Pursh a little north of Oneida River and called by him *Anona triloba* (now *Asimina triloba*, or North American Pawpaw). His words suggest comparative abundance, as he said "I found plants of *Anona triloba*, the first I seen this season." As it came from Pennsylvania it must have crossed Onondaga county, but a small part of which he had explored. In the wholesale destruction of plant life in pioneer days it is no wonder that even conspicuous trees have vanished. These were not large—ten to forty-five feet high—and would scarcely be noticed by the average farmer. As the conditions were alike on both sides of Oneida River, it seems fair to infer that, in a general way, trees, bushes and herbs were much alike also. It is not a certainty but it is much more than a possibility.

Geranium maculatum I have from Spafford, near Skaneateles Lake. Mrs. G. calls it common, but had her specimens from the north part of the county. Why it is called the Spotted Cranesbill I do not know. I find no spots on the flower or in its description. She credits another species as rare, but as found by L. Underwood in Howlett Gorge, July, 1893. This is the Carolina Cranesbill, and there is still another which I have not seen. While some of her species readily connect with Pursh's names' it is impossible to identify others, owing to modern revision of nomenclature, with some features of which we were both inclined to find fault. I add the five following plants to the Flora of Onondaga County: *Trillium cernuum*, *Helianthemum Canadense*, *Lysimachia punctata*, *Bartonia tensella*, *Centurea nigra*. I think some Spafford plants might be added to these.

I regret that I could not give more from the "Plants of Onondaga County," as it is on the cover, or the "Flora of Onondaga County," as the title-page reads, but it is a book of 210 pages, too much to add to this. It gives no descriptions of trees and plants. These are to be found in larger volumes—but it is a guide book, telling when and where to

find plants desired, in a broad and wise way. It will not do everything, but it will greatly aid those who wish help of this kind.

I conclude with some remarks on the field afforded by this county, and brief mention of some of those who have been interested in it.

In 1878, as the result of lectures by the Rev. Dr. Samuel R. Calthrop, an enthusiastic botanist, some ladies in Syracuse formed the Syracuse Botanical Club, which has now carried on its good work for forty-five years. Mrs. Stiles M. Rust (Mary Olivia) was the first president, and was followed by Mrs. L. Leonora Goodrich in 1884, who held that office till her death, April 5, 1923. In those years a great work has been done and none too soon.

The first writers on the Flora of Onondaga County were the Jesuit missionaries of 1657. Indeed they took in a larger field and rivaled the floral-catalogue of to-day. Here is a specimen: "The most common plant and the most marvelous of these countries, is that which we call the universal plant, because its leaves, bruised, close up in a short time all kinds of wounds; these leaves, of the size of the hand, have the figures of the lily painted on armor, and its roots have the odor of the laurel tree. The most vivid scarlet, the most brilliant green, and the yellow and orange most common in Europe, are inferior to the different colors, which our savages extract from the roots."

John Bartram, of Philadelphia, our earliest native botanist, was here in 1743, but said little in his journal of what he saw in that line. Linnæus pronounced him "the greatest botanist in the world." Many things show that his eyes were wide open, but his botanical notes were one thing, and incidents of travel quite another. Peter Kalm, who came through the Iroquois country some years later, illustrates this. He wrote of "*Arum virginicum*, Mr. Bartram told me the savages boiled the spadix and the berries of this plant, and devoured it as a great dainty." Kalm had a good deal to say on the vegetable food of the Iroquois. The Ginseng is medicinal, and this is his note: "The Iroquese or Five Nations call the ginseng root *garangtoking*, which, it is said, signifies a child, the roots bearing a fair resemblance to it; but others are of opinion that they mean the

thigh and leg by it, and the roots look pretty much like it." To look at them both you would hardly think that the above name and the Onondaga word Da-kyen-too-keh are the same. Pursh we know all about, and so we come down to later men.

John Goldie, who reported *Aspidium Goldieanum*, one of our finest local ferns, was here in 1819. His brief journal is in print but his botanical notes were lost by fire. Syracuse had not been dreamed of then, and he stopped at Salina two days, much to his disgust, which is thus expressed: "I have never been in a more disagreeable and unhealthy place than this. At this time a number of people were sick with fever and ague, a disease which is always to be found here. If it were not for the salt works I believe this never would be a village. Salt forms the only circulating medium about this part of the country. When a person brings anything to be sold, the first question is 'how much salt will he take?'" He used stronger words than these.

In 1897, the late Dr. W. H. Munson, of Otisco, wrote me thus of a tree of a kind mentioned by Pursh: "I am sure that you will be glad to know that two or three miles from here, in Christian Hollow, south of Cardiff, and in the town of Tully, there still stands a solitary and veteran Kentucky coffee tree (*Gymnocladus canadensis*). It is a large tree, over two feet through all the way up to eight or ten feet from the ground, tall and symmetrical. It blossoms in full every July, and is then a glorious sight, standing in the center of a valuable field. The owner allows the tree to remain, at much loss to himself, for sentiment's sake. I do not know of another tree of that species in this part of the country."

In Syracuse the Hon. Carroll E. Smith had several of these trees of moderate size, and there are others in the city.

Dr. Munson continued: "Last summer I was informed that a strange tree, with leaves as big as a horse, grew over in the Diggins' in the east part of this town. They told me that it was covered with thorns, and that the leaves all dropped off in the fall. My friend and neighbor, Mr. Cowles, accompanied me on the quest in July. This find proved to be Hercules' Club, *Aralia spinosa*. We found the tree, thoroughly acclimatized, growing in large numbers

(for a limited section) along a rocky hillside. We thought that the largest of the specimens were twenty or twenty-five, and perhaps more, years old. The wide spreading leaves, with their great petioles, were as big as a horse, too; and when the people saw them drop in the autumn they thought the boughs had fallen off. We have neither of us seen this *Aralia* growing in Central New York, except 'in the Diggins.'"

My father imported some of these, with other nursery stock, in 1848, but I do not know what became of them.

Perhaps the first systematic list of plants published here was that in Hon. George Geddes's agricultural report of 1859, entitled "List of Weeds Troublesome to the Agriculturist in Onondaga," and was prepared by my sister, Miss Mary E. Beauchamp. It comprised but sixty-nine kinds, the wild asters, golden rod, and some others, not being distinguished by species. Mr. Geddes's masterly report had much to do with the native trees of this county and their range. I copy most of what Mr. Geddes says of forest trees, retaining only the English names, and making some other omissions.

"A great variety of forest trees were indigenous in Onondaga county. The forests here were originally dense, and the timber generally heavy. Large forests of white pine grew in the north part of the county, and smaller areas of this valuable timber were found along the base of the Helderberg range, and a few scattering trees grew even above the corniferous limestone. There were some valuable pines in the swamps of the southern towns, but not enough to supply the demand. Along the south line of the Gypseous Shales were some trees of uncommon dimensions. . . .

"White Cedar abounded in the swamps north of the Helderberg range, and in small quantities amongst the pines in the southern swamps. This timber has furnished the materials for a large part of the rail fences in this county. Hemlock was very plenty in almost every part of the county, but was most abundant in the northern half. This valuable timber has been used extensively for building, fencing, and making plank roads. Two varieties of Spruce, black and white, are found in the swamps, but not in size sufficient to make it of any great value. Tamarack is found in the same

locality with the Spruce. Red Cedar, of which but few specimens can now be found growing, was formerly procured in small quantities around the head of Skaneateles Lake, and used principally about the village of Skaneateles.

"White Oak grows in abundance on the limestone soils. The gypseous shales were generally covered with a stunted growth of white oak, for the whole width of the county, east and west. The town of Otisco had large forests of this valuable timber, some parts of which yet remain. Some very large oaks were found on the low lands north of the Erie canal, and scattered among the scrub oaks of the gypseous shales. One of them, at Fairmount, was saved when the other timber was cut away, as a monument; but, deprived of its surroundings, it soon died, and of necessity was cut down. The stump was five feet in diameter, and forty feet above—where it was somewhat elliptical in form—its two diameters measured, the one four feet and six inches, the other three feet and ten inches. A block cut from this tree is still in existence.

"Black Oak, and some other varieties, were also found in this county. Two species of Hickory grew in abundance on the lime rocks with the oaks. Red Elm and Ironwood are found on the same soils, while the wet lands abound in the Swamp White Elm, Black Ash, Black Birch, Swamp White Oak, and the Sycamore. The Tulip Tree, the Basswood, White Ash, Sugar Maple, the Cherry and the Chestnut, abound on the lime rocks, and on the hills of the south part of the county. There were many other kinds of timber found in the county, but the most important have been given. The progress of improvement has swept away these once noble forests. . . .

"From the first settlement of the county the 'oak lands,' as they are called by the farmers, have been proverbial for their ability to produce wheat; and that belt of land, once covered with oak and hickory, is the true wheat land, while the beech and maple lands are best adapted to grazing, and the pine lands are generally well suited to both grain and grass."

I was tempted to give Mr. Geddes's account of the orderly succession of the rocks of this county, and their relations to our local plants as I suppose them, but this is unnecessary.

By indicating some of the highest and lowest points any one can see that elevation, as well as soil, is an important factor in plant life. Onondaga Lake is 364 feet above the sea, though this is more than the water line below Phoenix. The map credits a western branch of Cicero Swamp with 365 feet, the great eastern branch discharging into it, being thirty feet higher. Oneida Lake is 370 feet above mean tidewater, and Beaver Lake is 425, its waters flowing far north into the Oswego River, through a moderately level country with a sandy soil. South of Syracuse we are among gradually ascending hills, steep and full of rocky ravines, until we reach Ripley Hill in Spafford at a height of 1,986 feet, and an isolated hill in Fabius at 2,015 feet. The expected happens. You find life in the highlands that is absent from the lowlands, and perhaps still more if you reverse the case. The soil is different, the conditions different, and so must the results be, as a rule. Some forms of plant life easily adjust themselves to varying conditions, living almost anywhere, but having their best development where the environment is most favorable.

Beaver Lake bog and Cicero Swamp have their similar unique floras; the Green and White Lakes of DeWitt and Manlius have those of another kind; the Tully Lakes, in a broad way, have another, while Onondaga Lake, with its salt springs, has plants otherwise found only on the seashore. Of some of these plants we may well ask, How did they get here?

TRIBUTE

TO LUCY LEONORA GOODRICH

To Mrs. L. Leonora Goodrich, Librarian of the Onondaga Historical Association and President of the Botanical Club, whose death occurred April 5, 1923, the following tribute was paid by the Onondaga Historical Association on May 11, 1923, by a rising vote of its members, and it is hereby printed as a memorial to one who did so much for the study of botany and its history in Syracuse:

The passing of Mrs. L. Leonora Goodrich has severed a prideful link with the past. By her indefatigable research in history and science; by her love of those things which give to ancestral life due credit for the progress of our period, and by constant and persistent effort in the accomplishment of things worth while, Mrs. Goodrich has left a memorial with this Association that is indelible. That is the story of a life spent for others. But it was her sweetness in the gift of herself to things that make for a larger and more appreciative world that she made the friendship that was akin to a family relationship with those with whom she came in contact. To write of her life is like writing of the dearly loved of one's own family.

Born at Onondaga Hill July 2, 1831; educated first in the Stone School House at Onondaga Valley, later attending Miss Amelia Bradbury's Seminary in Syracuse, and at the age of 19 beginning the great work of teaching, a vocation by which later in life she was destined to so remarkably impress her personality and ability upon so many thousands of a coming generation, Mrs. Goodrich lived a life that was completely filled with endeavor for humanity. Mrs. Goodrich was the daughter of General Orrin and Susan B. Hutchinson, her mother being the daughter of Mr. and Mrs. Simeon West, pioneer settlers of Onondaga.

After a year's teaching in Marcellus, Mrs. Goodrich took up the same work in Syracuse, continuing it for two years, until 1853, when she wedded Mr. George Goodrich. Mr. Goodrich died in 1872, when Mrs. Goodrich again took up teaching, retiring in 1898, at the age of 67, close upon thirty years having been devoted to teaching. This long period of public school work was spent in the Prescott and Clinton schools, the principal's chair of the latter school

having been occupied by Mrs. Goodrich for sixteen years before her retirement.

Mrs. Goodrich was more than a pioneer in public school work—she was a pioneer in that method of interest in the teaching of facts of life which many years afterward was recognized by the term “vocational,” for to her study was living and she made her subjects living. She brought science into everyday life; she gave her pupils of her deep and rich knowledge. For her all nature and especially the flowers were personal. She had the capacity to make them personal to others. Into many lives she brought living things that have gone on and on, an influence of untold value. For thirty years she was president of the Botanical Club of Syracuse, before and after it became a branch of the Onondaga Historical Association. It might be truthfully said that Mrs. Goodrich was the Botanical Club, so closely woven with it was her thought and life. Her botanical contributions to literature are of great value, marking epochs and a chronicling of the county’s botany as it had never been done before. Few counties in the country possess such a complete catalogue, thanks to the wonderful work of Mrs. Goodrich. Her original work and discoveries have written her name in prominent type upon the scientific records of the State.

Yet, withal, she found time for other things which mark the progress of humanity. Mrs. Goodrich was one of the first women in Central New York to work in the cause of woman suffrage; she was a member of the old Political Equality Club and of the Auxiliary of the Hospital of the Good Shepherd, and her work in charitable and benevolent organizations was manifold. For nearly her entire life she was a member of the May Memorial Church, indeed long before it had its present name. And in this Onondaga Historical Association she was more than a mere member and worker, for she gave to it so much that no simple resolution may hope to chronicle it all. Hers was the fullest of lives, and, at close upon the age of 92, it has found repose, and, in that repose the Board of Directors of this association wishes to add this to the rich memories of that life:

Resolved, That in the death of Mrs. L. Leonora Goodrich, this Association has been bereft of one of its staunchest and most valued members; and

Resolved, That her life is a finer memorial than it is possible for the hand of man to erect; and

Resolved, That the spirit of research in history and science which she has inculcated in so many thousands will be carried on to the best of our ability; and

Resolved, That, while our deepest and most sincere condolence go to those who were closest to her, we feel that we must praise with them the Kind Providence that permitted us to share the blessings of such a complete life; and

Resolved, That these resolutions be spread upon the minutes of this Board.

GENERAL INDEX

	Page
Introduction to first publication.....	3
Adder's Tongue Fern.....	81
Adder's Tongue, Yellow, <i>Erythronium Americanum</i>	81
Andromeda polifolia, Wild Rosemary.....	98
Adams, John.....	65
American Bladder Nut, <i>Staphylea trifolia</i>	94
Apple, Sweet-scented Crab, <i>Malus coronaria</i>	92
<i>Apios tuberosa</i> , Ground Nut.....	93
Anniversary of S. B. C.....	81
<i>Anona triloba</i> , now <i>Asimina</i> , North American Papau	47, 66, 105
<i>Aquilegia Canadensis</i> , Wild Columbine.....	6, 91
<i>Apocynum cannabinum</i> , Indian Hemp.....	41
<i>Aralia nudicaulis</i> , Wild Sarsaparilla.....	8, 16
<i>Arethusa bulbosa</i> , <i>Arethusa</i>	89
<i>Asclepias tuberosa</i> , Pleurisy root.....	38
<i>Asplenium Scolopendrium</i> , Hart's Tongue.....	3, 44, 66
<i>Asplenium rhizophyllum</i> , Walking Fern.....	44
Ash, Mountain, <i>Sorbus Americana</i>	92
Ash Trees, Four.....	99
<i>Arum triphyllum</i> , Jack in the Pulpit.....	44
<i>Azalea nudiflora</i> , Pinxter Flower.....	18, 97
Bartram's Journal, John.....	106
Balsam Fir, <i>Abies balsamea</i>	85
<i>Bartonia</i> , Yellow, <i>B. Virginica</i>	99
Basswood, <i>Tilia Americana</i>	12, 94
Beach Woods.....	13, 62
Bear, A stout.....	30
Beauchamp's Notes, W. M.....	60
Bedstraw family.....	102
Bellflower genus, or <i>Campanula</i>	103
Big Bend.....	32
Black Viper or Blowing Adder.....	12
Black Swallow-wort, <i>Cynanchum nigrum</i>	99
Bladder Nut, <i>Staphylea trifolia</i>	94
Bladderworts, <i>Utricularia</i>	101
Blazing Star, <i>Chamælririum luteum</i>	86

	Page
Blitum capitatum, Strawberry Blite.....	90, 39
Boneset genus.....	104
Botrychium tenebrosum.....	83
Botrypus virginicus (of Pursh alone).....	40
Button Bush or Globe Flower, Cephalanthus.....	102
Buck Bean, Menyanthes trifoliata.....	99
Calla palustris, Wild Calla.....	24, 86
Cabbage, Skunk.....	86
Cabbage, Stag.....	51
Calopogon, or Grass Pink.....	89
Carrion Flower.....	88
Cardinal Flower.....	50
Carpinus Ostrya, Ironwood and C. Americana, Water Beech	43
Castilleja coccinea, Scarlet painted cup.....	101
Cayuta Creek.....	34, 64
Canada Thistle.....	56, 67
Cedar, Red and White.....	86
Centaurea nigra.....	104
Cettis occidentalis, Hackberry.....	89
Change of route.....	32
Change in classifying plants.....	82
Chara fragilis, Feather beds.....	39, 49
Choke Cherry.....	44
Chenango	33, 63
Chickory, Wild.....	104
Cicuta maculata.....	42, 66
Classification of Onondaga trees.....	108
Clematis virginica.....	9
Clintonia borealis, Yellow Clintonia.....	87
Club anniversary.....	82
Club Mosses.....	84
Coal pits and ferns.....	21, 63
Cohosh	44, 40
Comfrey	100
Conopholis Americana, Squaw Root.....	101
Cornus alternifolia, Green Osier.....	40
Cornus stolonifera, Red Osier.....	48
Cornus florida, Flowering Dogwood.....	5, 97
Cranberry marshes.....	16
Cranberries	98
Crowfoot, White and Yellow Water.....	91
Cusick, Albert, and Fred N.....	67

	Page
Cypripedium acaule, white.....	29, 63, 88
Cynoglossum officinale, [Tory burr.....	99, 39
Daisy, Ox-eye.....	104
Descriptions by Jesuits.....	106
Dentaria, Pepper or Crinkle Root.....	29
Dirca palustris, Leather wood.....	44-6
Dodder, parasitic.....	100
Drosera, Sundew.....	30, 92
Elder Berry, Sambucus.....	102
Elms	89
Epigæa repens, Trailing Arbutus.....	63, 16, 98
Equipment of Pursh.....	61
Erythræa centaurium, Bloodwort.....	99
Evergreens, Other.....	85
Ferns, Grape, or Botrychiums.....	82
Ferns, Other species.....	83
Flora of Onondaga by Mrs. Goodrich.....	81
Founders of S. B. C.....	106
Fossil shells.....	18, 33
Fossil Cactus, as then supposed.....	20
Fringed Milkwort.....	94
Frost Weed.....	95
Fungi, List of 200.....	86
Geddes, James and George.....	40, 43, 66, 108
Gentians	99
Geology and scenery.....	62
Gerardia flava and purpurea.....	46, 52
Geranium Robertianum and maculatum.....	8, 93, 105
Ginseng (Panax).....	9
Goldie's Journal, John.....	107
Golden Rod.....	104
Grasses	86
Grass of Parnassus.....	92
Ground Cherry.....	100
Ground Hemlock, Taxus baccata.....	86, 94
Helleborine, an Orchid.....	89
Helpers in botanical work.....	81
Hemlock Trees.....	85
Hemlock, Water and Poison.....	95
Hercules Club.....	95, 107
Honeysuckles	103
Horse Gentian or Fever-wort.....	102
Houstonia coerulea, Bluets.....	102

	Page
Howser's inn.....	10
Huckleberries	98
Hydrotyle Americana.....	23, 96
Hydrocotyle umbellata.....	47, 65, 96
Indian Pipe.....	97
Influenza	53
Introduction to first book.....	3
Ithaca and Gorge.....	35
Jamestown Weed.....	101
Journal, Pursh's.....	5
Journey begun.....	61
Johnstown	55
Kalm's Notes, Peter.....	106
Kentucky Coffee Tree.....	52, 93, 107
Large Round-leaved Orchis.....	88
Lands and nature of surface.....	110
Laurel, Swamp.....	98
Lily, Wood or Red.....	34, 64, 87
Lily, Meadow.....	87
Lily, White Water.....	49
List of troublesome, Early.....	108
Listeria australis.....	89
Little Falls.....	54
Liverpool, or Little Ireland.....	45
Lobelias	103
Loosestrife, Spotted.....	104
Lupin, Wild.....	93
Mallows	95
Mandrake, Common.....	11, 91
Magnolia acuminata, Cucumber Tree.....	35, 64, 90
Map, Curious.....	14
Maples	94
Mercury, Three-seeded.....	94
Militia training.....	51
Milkwort, Purple.....	93
Minisinks	11, 62
Michella repens.....	25
Mitreworts	92
Mosses	86
Mulberry	37, 64
Names of plants added.....	105
Nicotiana rustica, Real Tobacco.....	101
Oneida river.....	46

	Page
Oneida Indian village.....	54
Onondaga	65
Onondaga Indian names of our Flora.....	67
Onondaga Co. Flora.....	81
Organization of S. B. Club.....	106
Orchids	88
Orchis bifolia 28, 42, and spectabilis.....	28
Orontium, Golden Club.....	16, 86
Osmundas	83
Oswego, 47, and road to.....	46
Oswego Co. Plants.....	66
Owasco	37, 64
Owego	33, 63
Oxalis acetosella.....	17, 63
Palatine Church.....	54
Papaw, Anona triloba.....	66
Partridge Berry.....	102
Pepperidge or Sour Gum.....	97
Pigeon Pea.....	28, 63
Pines	85
Pinks	90
Pitcher Plant, Sarracenia.....	16, 91
Plantains	103
Pogonias	88
Poke-weed	90
Pokono Mountain.....	14
Pompey and Pratt's Falls.....	51, 67
Poisonous plants.....	95
Prickly Ash.....	38, 93
Prince's Pine.....	12, 62
Pursh in Onondaga.....	61
Pursh's plant names so far identified.....	79
Pursh starts from Philadelphia.....	5
Tioga	34, 63
Webster, Ephraim.....	65, 40, 42
Woodsia Ilvensis.....	83

UNIVERSITY OF ILLINOIS LIBRARY
JAN 28 1924

UNIVERSITY OF ILLINOIS-URBANA



3 0112 072853762

UNIVERSITY OF ILLINOIS LIBRARY
FEB 4 1924